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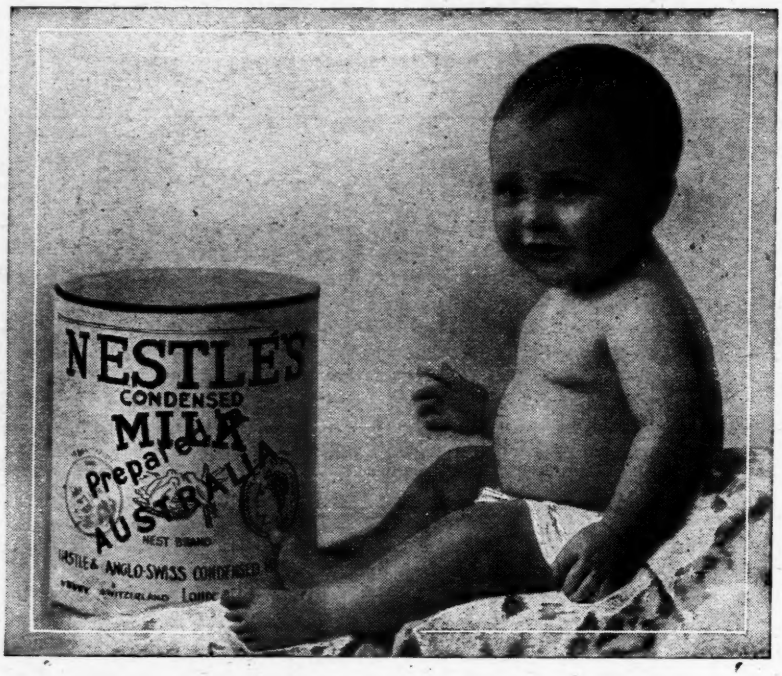

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THE MEDICAL JOURNAL OF AUSTRALIA.

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OBSERVATIONS ON THE DIAGNOSIS AND TREATMENT OF MALARIAL FEVER.

By **E. Noel Bateman, M.B., B.S. (Dubl.),**
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During the military operations in Palestine and Syria in 1918 an extensive outbreak of malaria occurred amongst the Australian Light Horse situated in that region. Sixty per cent. of the troops were affected and many patients showed exceptional and confusing symptoms. Considerable numbers were invalided home uncured, so that it is probable that an increase in the disease will occur in Australia, where it is already common. As the methods of diagnosis and treatment which proved reliable in Palestine, differ considerably from those generally used in civilian practice, an account may be of interest to some who acquire malarial patients, and others who have malarial patients thrust upon them.

In connexion with this subject I gratefully acknowledge the help and advice of Lieutenant-Colonel C. B. Blackburn, Senior Physician to the 14th Australian General Hospital.

Incubation Period.

The time varying between infection and the exhibition of symptoms in malaria is usually about ten days, but may be much shorter or longer. It is common for a man to be attacked by malarial fever months after he has left an infected district. An examination of 100 apparently healthy men in the Jordon Valley showed 7% of these latent cases. A typical attack of non-pernicious malaria, whether due to *Plasmodium vivax, P. falciparum* or *P. malariæ*, presents the same clinical features. Malaria caused by the malignant tertian parasite is not necessarily a severe illness, as the word malignant might lead one to suppose.

Symptoms.

The premonitory symptoms are lassitude, headache and backache, with slight rise of temperature.

Cold Stage.—Pains are complained of in the back and limbs; violent shivering and sometimes vomiting occur. This stage lasts about an hour and is accompanied by a steady rise of temperature.

Hot Stage.—The shivering abates and the temperature continues to rise until it reaches 38.8° to 41° C.. The skin is flushed and the pulse strong and rapid. On physical examination one finds an enlarged and tender spleen. The hot stage lasts about four hours and is succeeded by the cold stage, in which the temperature falls rapidly and the symptoms subside. Sometimes in benign or malignant tertian fever there is little to suggest the presence of malarial parasites. An attack resembles an acute gastritis or gastro-enteritis and its real nature may easily be missed.

I have seen several cases of malaria in which hæmorrhage from the stomach or rectum was a prominent symptom. Diarrhœa with blood in the stools is quite common even in cases of moderate severity.

Pernicious Forms of Malaria.

Pernicious malaria is always due to the malignant tertian parasite. Patients who have had many relapses of malignant tertian malaria of mild severity, may at any time exhibit this dangerous type.

Symptoms.

The onset of symptoms in pernicious malaria is often extremely sudden. A soldier may fall down during a march and rapidly pass into a state of coma. Usually the onset is more gradual. The patient complains of headache and drowsiness, which gradually increases to coma, terminating in death, unless treatment is prompt and effective. On examination the temperature is found to be high, the spleen and sometimes the liver enlarged.

In the algid form of pernicious malaria the temperature is normal or subnormal and the patient profoundly collapsed. The pulse is weak and rapid, the face cyanosed and severe rigors occur. This is the most dangerous form and requires prompt and bold treatment.

Blackwater Fever.

Very few cases of blackwater fever occurred amongst the Australian troops in Palestine. It was apparently much more common in Salonika and Captain Alport has written an account of the conditions in his book on malaria fever. I quite agree with him in the conclusion that blackwater fever is a complication of malaria and requires quinine treatment. According to Captain Alport hæmoglobin appears in the urine (1) during an early stage of blackwater fever, in which the urine contains hæmoglobin, but no casts or cells; (2) in patients exhibiting an idiosynerasy towards quinine; and (3) in a very severe condition of acute general toxæmia, chiefly affecting the kidneys.

In this third form the urine is the colour of porter and contains numerous red cells and casts.

The symptoms are headache, vomiting, rigors and fever. Suppression of urine may occur from blockage of convoluted tubules with débris. The spleen and liver are enlarged and tender.

Diagnosis.

The blood of a patient suspected of malaria should be sent to the laboratory for examination as soon as possible. It is best to take the smear before the administration of quinine. About eight hours after the rigor the parasites are most abundant in the peripheral circulation.

Malaria has to be distinguished from relapsing fever, influenza, typhoid, typhus and septic infections. Amœbic abscess particularly must be borne in mind. Cerebral malaria may be confused with sunstroke, coma or cerebro-spinal fever. In dealing with malarial cases it is of the utmost importance to be able to detect an enlarged spleen. Sometimes the spleen can be felt with the patient lying on his right side, when palpation is otherwise impossible. Percussion should be carefully carried out, as, contrary to a

widely accepted view, a spleen may be, and often is, greatly enlarged (upwards) and is yet not palpable.

Failure to detect parasites in the blood does not quash a diagnosis of malarial fever. Cerebral and latent cases and those in which quinine treatment has been adopted, are commonly negative.

A total and differential leucocyte count should be done. In malaria, except at the height of the fever, there is a leucopenia with relative increase in large mononuclear leucocytes to 15% or 20%. This mononuclear increase continues for at least 3 weeks after an attack. Pigmentation of the leucocytes, especially the large mononuclear cells, also occurs. When organisms cannot be found in the blood, examination of the sediment from a centrifuged specimen of urine may help to establish the diagnosis. It is said that under a high power granules of an intense black colour will be observed (Uriola).

Having been unaware of this test until quite recently, I have been unable to test its value.

In typhoid there is a leucopenia, but no increase of large mononuclear cells. Cerebro-spinal fever and septic conditions constantly give a distinct leucocytosis.

The results of Wassermann reaction done on malarial patients with no history of syphilis may be here mentioned. At the height of the fever positive results were obtained. A week later the test in these patients gave negative response. The experience of others also goes to prove that positive Wassermann reactions in malaria are only obtained in the acute stage. Cases resembling cerebro-spinal can be differentiated by lumbar puncture. In malaria the fluid is clear, sterile and not under increased pressure. In cerebro-spinal fever it is turbid, under raised pressure and meningococci are present. In severe undiagnosed illness resembling one of the forms of malaria, if the spleen is enlarged and the large mononuclear leucocytes are relatively increased, quinine should be used in adequate doses.

Treatment of Malaria

All forms of malaria, including blackwater fever, can be cured by the administration of quinine, if it is used early and in a suitable manner.

Preparations of Quinine.—Quinine sulphate is soluble 1 part in 800 parts of water, or 0.01 grm. in 0.0091 c.cm. of dilute sulphuric acid.

Quinine hydrochloride is soluble 1 part in 36 parts of water.

Quinine bi-hydrochloride is soluble 1 part in less than 1 part of water.

Acid quinine hydrobromide is soluble 1 part in 6 parts of water.

Methods of Administration.—(1) By the mouth. (2) Intramuscular injection (popularly known as "harpooning"). (3) Intravenously. (4) By rectum (1.3 grm in 326 c.cm. of saline solution).

When quinine is ordered by the mouth it should be taken as a powder or in solution. Compressed forms are very unreliable. The best preparation for oral, intramuscular or intravenous use is the bi-hydrochloride.

Method for Intramuscular Injection.—A solution of quinine bi-hydrochloride 0.06 gram to 1 c.cm. of normal saline solution is prepared. Greater strength is irritating to the tissues and may cause abscess formation. A serum syringe of 20 c.cm. capacity is filled with the warmed solution and after the skin has been cleansed with spirit and painted with iodine, the injection is made into the buttock, about 5 cm. below the iliac crest. The needle is introduced perpendicularly and the injection made very slowly. A fine needle should not be used, as it is likely to break if muscular contraction takes place. The next injection should be given in the opposite buttock.

Cases of tetanus have been recorded after superficial injections of quinine, probably as a result of lowered resistance in the tissues followed by infection through the short track leading to the infiltrated area. Intra-muscular treatment is quite safe if given with proper precautions as to cleanliness. Quinine abscess was rare in the 14th Australian General Hospital. It begins with a brawny swelling round the site of injection. Hot foments and complete rest in bed will generally abort it, otherwise a fluctuating tumour forms, containing a sterile chocolate-coloured fluid. Aspiration is much the best method of treatment and usually results in cure in a week. Incision and drainage takes four to six weeks in healing.

Intravenous Injection.—This method of treatment has been proved to be perfectly safe if administered with ordinary skill.

About 170 c.cm. of saline solution containing 1.3 grm. of the bi-hydrochloride are run into the median basilic or cephalic vein. A large quantity of saline solution should not be used, owing to the danger of over-dilating the feeble heart. The solution must be kept at a temperature of about 48.5° C. and surgical cleanliness observed in the technique.

It is of great importance to treat a primary malaria vigorously. In my experience, recurrence is more common amongst patients who have had feeble initial treatment, than amongst those who have been left entirely without quinine, until adequate dosage was employed. The following treatment for non-pernicious primary malaria may seem excessive, but less vigorous methods will probably cause disappointment.

First day: Quinine, 1.3 grm. intramuscularly, 1.0 grm. three times a day by mouth. If the attack is unusually severe a second injection of 1.3 grm. is given.

Second and third day: The same treatment is given.

Fourth day: Quinine by mouth, 2.9 grm. in solution, provided that the stomach and bowels are acting normally.

Fifth day: The same treatment is given.

Sixth day: Quinine by mouth is continued if the spleen is normal in size and no rise of temperature has occurred since the initial attack. If the spleen is bigger than normal, three more quinine injections, 1.3 grm. each, are given on successive days and 2.9 grm. a day taken by mouth. If the spleen is not large, quinine by mouth, 2.9 grm. a day, is continued for three weeks with iron and arsenic, if indicated. After four weeks' treatment the dose may be reduced to 1.3 grm. a day until the patient has been free from relapse for three months.

The bowels must be kept regular from the start of treatment. The diet should be liberal and in the majority of cases the patient may be allowed up and outside in a week from his first rigor.

It is sometimes stated that small doses of quinine are as effective as large ones. I have invariably found small doses of quinine in malaria an absolute failure.

The spleen is a useful guide to treatment. If it is enlarged, the patient is not cured and if his quinine is discontinued, another attack of malaria sooner or later is a certainty.

Patients with cerebral symptoms and those dangerously ill should always be given quinine intravenously. The amount depends on the severity of the case and the response to treatment. As early as possible after the provisional diagnosis of malaria is made, 1.3 grm. of quinine should be administered by the intravenous route, followed by an intramuscular injection of 1.3 grm. two hours later. If the patient shows signs of improvement in six hours, intramuscular treatment may be continued every three hours until the danger is past and oral administration can be safely substituted. If necessary, one need have no hesitation in giving 3.8 grm. of quinine intravenously in 12 hours.

Treatment of Blackwater Fever.

Captain Alport's large experience of this conditions leads him to advocate vigorous quinine administration in serious cases. The following is the course of treatment he recommends:—

First day: Quinine, 4 grm. in 12 hours, two intravenous and one rectal.

Second day: Quinine, 4 grm., one intravenous, two rectal.

Third day: If improvement is marked, quinine 4 grm., one intramuscular, two rectal.

Suppression of urine in blackwater fever is due to blocking of lumen of convoluted tubules and when this occurs measures should be taken to increase the pressure in the systemic circulation.

In cases with suppression of urine quinine must be given in smaller doses than recommended above, as the drug is eliminated very slowly and its cumulative effect may cause ambylopia.

The loss of sight is temporary and quinine may be resumed when vision returns.

It is best to start with 1.3 grm. or 2.6 grm. a day and to increase the amount gradually if the urine is normal in quantity.

Treatment of Chronic Malaria.

Patients suffering from chronic malaria are greatly benefited by a sea voyage, with vigorous treatment on board. Failing this, quinine, 3 grm. a day, should be given, with three intramuscular injections of 1.3 grm. a week, until the spleen is normal. If a relapse occurs, the amount of quinine must be increased.

After four weeks it will generally be possible to reduce the dosage to 2 grm. a day, which amount should be continued until the patient has been free from attacks for three months.

Iron and arsenic will probably be needed to combat the anæmia. Other therapeutic measures tried unsuccessfully for chronic malaria were galyl, eusol and X-rays for the enlarged spleen.

Objections to Quinine.—(1) Its nasty taste. This should not prevent its administration in a serious disease like malaria. (2) Its action in causing a rash. (3) Its action in causing deafness. (4) Its action in producing ambylopia.

Quinine rash is not very common, but it is sometimes most troublesome. It is usually erythematous, but may present a great variety of appearances. Occasionally swelling of the face and eyelids accompanies the urticarial type.

I have not found changing the salt of quinine or the dosage of any use in preventing the rash. The drug should be discontinued if the symptoms are severe. When the skin is clear, arsenic is given for a few days and quinine combined with small doses of arsenic started again.

Deafness, noises in ears, etc.—These symptoms pass off as the patient grows accustomed to the drug. Ambylopia is exceedingly rare and has already been referred to under blackwater fever.

Complications.

Anæmia.—This is common in chronic cases. The hæmoglobin may be reduced to 60% and the red cells to 2 or 3 millions. The condition improves rapidly with treatment by iron and arsenic by mouth.

Tachycardia.—Irregular cardiac action is generally seen in frequently relapsing cases. Sometimes organic lesions occur. Post mortem it is often seen that fatty degeneration of the heart has taken place.

Obscure Nervous Conditions.—Patients who have had malaria, frequently exhibit symptoms suggestive of disseminated sclerosis or functional nervous disorders. The treatment is a course of quinine and improvement of patient's general condition.

Peripheral Neuritis.—This occurs after malaria in many cases and yields rapidly to quinine, iron and arsenic.

Appendicitis.—The frequency of appendicitis in malaria is due to lowering of the patient's powers of resistance. The indications for surgical treatment are the same as in the uncomplicated condition.

Pernicious Malarial Anæmia.—In addition to ordinary anæmia, a variety occasionally occurs, which closely resembles Addison's pernicious anæmia. It is a condition of grave progressive anæmia, which continues after the malaria is cured (Castellani). It is doubtful whether malaria is the whole cause of this disease. It occurs in old and feeble patients or those suffering from severe anxiety or shock. The patients are thin and sallow and suffer from tachycardia and tremor. Cardiac murmurs are generally detected on auscultation. The spleen and sometimes the liver are enlarged.

In Addison's anæmia the red cells are reduced from ½ to 2½ millions per c.mm.. The reduction of hæmoglobin is less in proportion and the colour index consequently high. Poikilocytosis is marked, normoblasts, myeloblasts, micro- and macro-cytes are found in the blood. The condition is fatal.

Pernicious malarial anæmia is divided into four types (Bignami).

(1) Diminution of red cells and hæmoglobin, low colour index; normoblasts present; leucopenia, with large mononuclear increase. The prognosis is good.

(2) Great diminution of red cells, normoblasts, myeloblasts, myelocytes, poikilocytosis, leucopenia, with large mononuclear increase. The prognosis is bad.

(3) No normoblasts, otherwise as in No. (2). The prognosis is extremely bad.

(4) As in No. (1), but marked leucopenia and few normoblasts. The prognosis is bad.

Treatment.

Galyl intravenously, 0.2 grm., given every week with iron by the mouth may be tried. Quinine does not appear to help. The results of treatment in these grave cases of anæmia are naturally unsatisfactory, as our knowledge of the causative agents is so limited.

Conclusion.

In dealing with blackwater fever and pernicious malarial anæmia I have made use of Captain Alport's book to a large extent, otherwise this account is drawn entirely from my experience with the Australian Imperial Force in Palestine.

THE MODERN CONCEPTION OF CHRONIC MASTITIS

By H. C. Rutherford Darling, M.D., M.S. (Lond.), F.R.C.S. (Eng.), F.R.F.P.S. (Glas.),

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Chronic mastitis, as understood here, is applied to a chronic inflammatory process affecting the mammary gland and characterized by the formation of fibrous tissue, which not only results in compression of the acini and ducts, thus leading to atrophy and sometimes obliteration of these structures, but also to cyst formation in the ducts, due to the occlusion of a certain portion of their lumen, and consequent dilatation of the remaining portion.

In a certain number of cases (according to Warren, in about 50%) changes also take place in the epithelium of the ducts and acini.

There are few affections of the mammary gland of greater importance than the different varieties of this disease, few regarding which so many difficulties of diagnosis occur and none in which differences of pathological doctrines and histological appearances are more manifest.

Ætiology.

Of its ætiology we know little or nothing.

(1) *Sex.*—We know that it occurs in women, usually after the thirtieth year; it occurs amongst women who have borne children, amongst married women who have not borne children and amongst single women who have not borne children. It also occurs in men.

(2) *Age.*—Owing to the fact that it usually occurs between the thirtieth year and the period of the menopause and, furthermore, on account of certain of its pathological characteristics, it has been termed by certain American writers "abnormal involution."

(3) *Trauma.*—The breasts are constantly liable to slight traumatism and it has been stated that blows, injuries, pressure of corsets, etc., are important determining factors; but there is little, if any, evidence in support of the above contention.

Theories.

It is by no means certain that interstitial mastitis is a single disease.

The most varied of opinions have been expressed about its causes, nature and mode of development. Some authors have considered chronic mastitis to be purely an inflammatory process; others have considered it entirely overgrowth, while still others have seen only evidences of tumour formation.

I.—Inflammatory Theory (Banks, Binaud, Selbet, Paul, Phocas, Koenig, Roloff, Shield, Williams).

Chronic inflammation is indicated by the round-celled infiltration and thickening of the stroma of the gland and by the clinical course of the disease, which is thought to be subject to repeated exacerbations. If the condition be an inflammation, it must be assumed that the phenomena are really a series of responses to some form of irritation, either mechanical, bacterial or chemical. No relation between this disease and any micro-organism has yet been established. There are some who claim that all such hyperplastic inflammations are caused by toxins produced in the stagnant bowel; in other words, they are due to auto-intoxication, the result of fæcal stasis. We must, however, remember that many of the symptoms attributed by Lane to chronic intestinal stasis are identical to those which have been included in the symptom-complex of benign chronic sub-thyroidism by Hertoghe (*myxœdème fruste*). The ovary exerts a trophic influence on the mammary gland and determines its normal cycle and, conversely, oöphorectomy leads to atrophy of the mammæ and frequently to changes identical to those met with in chronic mastitis. In conclusion, the fact remains that in the breast, as in chronic inflammation of certain other organs, notably the liver and kidneys, pathological knowledge of the cause of the fibrosis is not yet complete.

II.—Neoplastic Theory (Schimmelbusch, Sasse, Malby, Tietze).

This theory, although widely accepted in Germany, has only obtained scant support in other countries. Sasse and others have attempted to separate the lesser degrees of this disease, under the term "involution cyst," from the more advanced stage of "polycystoma," but such a classification is artificial, for one condition merges directly into the other.

III.—Involution Theory.

This theory has obtained wide support from American investigators and refers the changes met with to the abnormal conditions produced by involution. The mammary gland throughout life is subject to rapid evolutions and involutions, with constant changes in its actual tissue, so that the component structures of the gland are extremely varying in their relations one to the other and extremely variable in their inherent composition and architecture. Anything that disturbs the equilibrium of the changes that take place within the range of normality, may lead to an over-production of any or several of the structures in such a way as to result in a condition of chronic mastatis.

Terminology.

The surgeon's progress has been greatly impeded by a rich, but chaotic, terminology, for which he is

partly responsible, on account of his insufficient knowledge of normal and pathological processes and conditions; but the pathologist is also to blame, by his withdrawal from the immediate field of clinical activities of his practical colleagues. Furthermore, different stages of the disease give varying clinical, macroscopic and microscopic appearances, which also shares in the production of this chaos.

Synonyms.

Chronic interstitial mastitis (Banks, Paul, Bryant, Shield and Lockwood); chronic cirrhosing mastitis (Billroth); chronic mammary tumour (Astley Cooper); *maladie cystique de la mammelle,* or intra-acinous cystic epithelioma (Réclus); *maladie de Réclus*; nodular mastitis, or *maladie noneuse* (Phocas); chronic cystic mastitis (Koenig); periductal mastitis (Delbet); *fibroma mammæ tuberosum,* or *lolulare* (Virchow); *polycystoma epitheliale* (Sasse); cyst-adenoma (Schimmelbusch); plexiform fibroma (Binaud); epithelial cirrhosis (Quenu); cystic epithelioma (Lacoulet); chronic mastitis, or diffuse fibro-adenoma (Wood); cystic disease of the breast (Bryant); papillary epithelioma (Cornil); *mastitis chronica fibrosa* (Gelpke); *mastite de la ménopause* and chronic diffuse mastitis (Baumgartner); fibrous glandular hyperplasia, with retention cysts (Whitney); abnormal involution (Warren); senile atypical parenchymatous hypertrophy (Bloodgood); cystoma (Tietze).

Symptoms.

(1) *Swelling.*—The disease is usually discovered by a woman noticing a swelling in some portion of the breast, to which, perhaps, her attention has been directed on account of uneasiness, or even actual pain.

(2) *Pain and tenderness* are present in about 50% of cases and, although not diagnostic, these symptoms must be considered of significance, in view of the generally painless character of early carcinoma.

Signs.

Chronic mastitis is most common after the thirtieth year, up to the time of the menopause. It is frequently bilateral, the lesions being found principally at the periphery of the breast. There is seldom great increase in the size of the organ, the change being more one of texture than a hypertrophy. The progress of the disease is slow and chronic, but it is not steadily progressive; sometimes there are intermissions. Koenig has called attention to the fact that new nodules sometimes develope at each menstrual period.

For clinical purposes it may be well to follow the description of Jamain and Terrier and classify cases of chronic mastitis into circumscribed and diffuse, but it must be remembered that the circumscribed variety is rare. Chronic mastitis is not, as a rule, equally developed in the whole of an affected area, for even in a part which appears circumscribed, there are adjacent lobes and lobules, unduly hard and obviously affected; the process "shades off" imperceptibly into indurated breast tissue.

These areas of induration, ranging in size from that of a pea to that of a hen's egg and varying in consistency from moderately firm to hard, are generally scattered about the breast irregularly, being seldom uniform in arrangement. The feeling resembles a fatty mass of tissue, with the glandular lobules in the centre injected with suet (Terrier).

As soon as a distinct nodule is felt with the flat of the hand, persistent increase is generally observed and, if the nodule be not a cyst, it is probably carcinoma. It appears, however, that a cyst, to be appreciated clinically with certainty by its elastic feeling or fluctuation, must attain considerable size. Retraction of the nipple, although occasionally noticed, is not a characteristic or a part of this disease. Enlargement of the axillary glands is only detected in a small percentage of cases and occasionally they may be found to be tender on palpation.

Macroscopic Anatomy.

The chronically inflamed lobule is tough and leathery or of the consistency of india-rubber; it presents an opaque white colour on section and is traversed in all directions by bands of fibrous tissue. Small, blue-domed retention cysts are scattered through its substance, the contents of which are clear and serous or sometimes turbid and brownish in colour.

The process is diffuse in the vast majority of cases, although one lobule of the gland is often noted as the situation in which the disease is most advanced. Furthermore, the limits of the diseased part are not clearly defined.

Sometimes the cysts may reach such a size as to form obvious tumours in the gland; the section of a localized area presents an appearance very similar to that of a cystic adenoma, except that it is not encapsuled. In rare cases these cysts attain exceptional development and cause a considerable increase in the size of the breast (cystic disease of the breast).

Microscopic Anatomy.

The histological changes are of such a variety that the disease has received a great many names, most of them indicative of some characteristic of the pathological changes. For instance, it has been called interstitial mastitis, because of the over-development of the interstitial fibrous tissue; it has been called cystic mastitis on account of the abundant cyst formation; it has been termed a form of adenoma on account of the abnormal development of the epithelial structures. These various histological changes represent either distinct stages of the disease or its development according to certain tendencies.

I.—Interstitial Tissue.

The breast shows a great increase in the interstitial connective tissue. The new fibroid tissue contains a varying number of small round- or oat-shaped cells, according to the stage of development and the activity of the process. In developing into fibrous tissue the new growth contracts and the ducts become compressed and many of the acini obliterated. Other ducts, however, often become distended by small quantities of abnormal secretion and thus retention cysts are formed. This hyperplasia, which takes place in the interstitial tissue, may be the predominating feature, the walls of the acini, ducts, etc., becoming thickened and fibrous. These over-productions may then appear like tumour formations, but

they do not progress to isolated and encapsuled tumours; they are more like tumour masses (so-called diffuse fibro-adenoma).

II.—Cystic Changes.

Owing to pressure and obstruction of the ducts, cysts are very apt to form in chronic mastitis. These may vary from the size of a walnut down to microscopic dimensions. They are usually simple retention cysts, lined internally by smooth epithelium and filled with straw-coloured or slightly blood-stained fluid, if there be associated intracystic growth. Intracystic papillary growths are, however, usually absent in these cysts or, if present, are confined to one or more small vegetations.

The cysts are occasionally so numerous as to riddle the breast with cavities. Various theories have been advanced as to the manner in which these cysts are produced. Some claim that they are purely retention cysts, secondary to stricture of the ducts, produced by the over-production of fibrous tissue. Others claim that they are formed by the breaking down of the fibrous septa between the acini and ducts, with their consequent coalescence; thus two or several acini become one cyst cavity. Again, others claim that they are the natural result of actual epithelial hypertrophy and proliferation, with subsequent proliferation and degeneration of the cells. In sections the process of development of cysts can be apparently observed by each of these three methods. When the processes have reached a certain degree, the cysts and intracystic growths become visible to the naked eye. These intracystic growths are composed of extremely finely divided branching papillæ, which are attached to the cyst wall by a narrow pedicle.

III.—Epithelial Proliferation.

It is necessary to consider in detail the behaviour of the glandular epithelium, in which there is a very active change. A mammary acinus is composed of one row of columnar or cuboid epithelial cells, which are the functionating or secretory cells. These rest upon another layer of cells, which are almost invisible in the normal breast, but which become prominent when a chronic inflammatory reactive process is present and are called the "germinal epithelium of the breast." The abnormal condition of cyst formation provides a stimulus which, in about 50% of cases, leads to secondary epithelial proliferation, of which one or more of three histological pictures may be seen (MacCarthy).

(*a*) *Primary Hyperplasia.*—Here a hyperplasia of the epithelium of the acini is found, characterized by prominence of the outer row of cells, but the inner layer of secretory cells has not yet been exfoliated. This represents the usual reaction in chronic mastitis.

(*b*) *Secondary Hyperplasia.*—Secondary hyperplasia is found described as "cyst-adenoma," "Schimmelbusch's disease," "Réclus disease," senile parenchymatous hypertrophy, etc., and is placed in the benign group by most authorities, but in the malignant by others. At this stage the inner row or secreting cells have been exfoliated and have not been renewed. Instead of renewing the secreting cells, the germinal epithelium continues to proliferate into the lumen of the acini in an undifferentiated condition, but is still confined within the acinal limits. The epithelial cells become heaped up and project into the lumen (without a connective tissue pedicle). The picture strongly suggests that more epithelium is produced than can be accommodated on the basement membrane. In certain cases papillary outgrowths from different portions of the cyst walls appear to meet and fuse, giving the picture of spaces filled with epithelial cells in which here and there an open gland lumen is observed. The cells in secondary hyperplasia are stated to be often indistinguishable from cancer cells, an observation which arouses the suspicion that the two conditions are intimately related.

(*c*) *Tertiary or Migratory Epithelial Hyperplasia* is recognized by the extra-acinar or migratory activities of the undifferentiated germinal epithelium. It is the histological picture of carcinoma.

To sum up these processes, it will be seen that the disease is a very complex one. It consists of a chronic inflammation, of overgrowth of certain of the structures, of the production of fibro-epithelial pseudotumours, which are really more than overgrowths, and, finally, the production of carcinoma. There seems to be a general agreement that these various histological changes really represent progressive stages of the disease. Furthermore, different cases of this disease not only present a great variety of processes, but different parts of the same breast may show a great variety of pathological changes, almost contradictory in character.

It we were able to state at what point this epithelial proliferation would cease, no danger from this disease need be apprehended; but a number of different observers have demonstrated that in the proportion of about one case in ten this epithelial proliferation passes into the territory of malignant new growth.

Diagnosis.

The clinical picture of the early stages of chronic mastitis cannot be distinguished from that of involution and, furthermore, the degree of epithelial proliferation cannot be determined by any known physical sign. Microscopic examination is therefore absolutely necessary for accurate diagnosis and a careful study of sections seems to show that there is no apparent sharp line of demarkation between chronic mastitis and carcinoma.

Time after time the diagnosis is made of a patch of induration and only when the latter has greatly increased in size is the diagnosis of carcinoma at last forced upon the too-confident observer. An induration in the breast at or about the time of the menopause, which is palpable with the flat of the hand, should be explored. In nine cases out of ten it will prove to be more than chronic inflammation. It may prove to be a cyst, a chronic abscess, a carcinomatous deposit, or a true fibro-adenoma. To sum up, the early diagnosis of a minute carcinomatous deposit depends upon the microscopic appearances; macroscopic diagnosis, even when made by an expert, is of value only in a small proportion of cases.

Prognosis.

The prognosis of a given case of chronic mastitis untreated is a matter of considerable uncertainty.

During the earlier stages, more or less resolution may take place, but where there has been much epithelial proliferation, especially with the formation of tumour-like masses, restitution to the normal can hardly be conceived. The disease usually becomes stationary at a certain stage of its development and less frequently advances slowly, involving more and more of the gland substance.

Carcinoma developes in something over 10% of all cases. It is not known why all cases of chronic mastitis are not associated with carcinoma; it probably depends upon bodily resistance.

In the foregoing I have endeavoured to show how chronic mastitis may vary, not only in degree, but also in character, how it may represent merely a chronic hyperplastic inflammation, how it may become more than an inflammation, an actual benign tumour formation—diffuse fibro-adenoma—and how it may produce cystic disease of the breast. I have indicated also how the epithelial proliferation may transcend into the generation of carcinoma.

Treatment.

It will be seen on looking over the literature that unanimity of opinion does not exist in regard to the treatment of chronic mastitis. In some cases of this disease, especially in young women, the usual medical treatment is satisfactory, but in the majority of cases, especially in climacteric mastitis, drug treatment is of no avail. In any case, drug treatment should not be given more than a fortnight's trial.

In the latter group of cases the method of treatment depends upon the microscopic and macroscopic findings. If no evidence of carcinoma be found, either the partial operation, consisting in the removal of the apparent tumour formation, together with a considerable section of the breast tissue surrounding it, or in the more advanced cases, simple removal of the breast, preferably by the Warren-Thomas plastic operation, should be advocated.

On the other hand, the discovery on microscopic examination of a localized area of carcinoma, without any macroscopic evidence of its presence, should be the factor determining removal of the entire gland, together with the nipple and areolar tissue. It does not seem justifiable to perform the so-called radical or complete breast operation in the absence of definite clinical or macroscopic signs of infiltration. Accepting Sampson Handley's theory, that carcinoma spreads by permeation (and this seems to be true until the larger lymphatic trunks are reached), simple excision of the breast appears to be sufficiently radical. This plan removes the possibility of unnecessary radical operations and their physical and psychic embarrassment.

In conclusion, therefore, in these cases it is of the utmost importance to have a competent microscopist present at the operation, so that a portion or portions of the diseased tissue may be examined at once, with a view to determine whether any signs of carcinomatous degeneration are present or not.

Furthermore, the specimen removed should be again submitted to microscopic examination by the aid of embedded sections, for, as pointed out above, great variations occur in different parts of the same gland and hence careful examination of the whole tumour mass is necessary for a correct diagnosis.

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PAPULO-URTICARIAL RASHES CAUSED BY THE HAIRLETS OF CATERPILLARS OF THE MOTH (*EUPROCTIS EDWARDSI* NEWM.).

By J. Burton Cleland, M.D. (Syd.),
Principal Microbiologist, Microbiological Laboratory, Department of Public Health, Sydney.

At the end of March, 1916, reports were received of the occurrence of irritating rashes amongst a number of people residing at Lindfield, on the North Shore line, near Sydney. The rashes occurred amongst members of several families and followed the handling of dead wood, as, for example, getting wood ready for the copper or even in the case of a boy from sitting on a log at the Killara Golf Links. Touching old fencing also was said to give rise to them.

A special visit was made and inquiries conducted. At one house one of the inmates was a girl, aged about 20, who was said to be liable to the rash. At my request she went to the back of the wood house and handled some firewood. Two or three minutes later

she developed extensive irritation on the arms and neck. I myself then handled the same wood, but felt no immediate effects; eight hours later, however, there was some irritation and next day there were forty-two small wheals on the right arm and about four on the left.

At the time, the cause of these rashes was not ascertained. Several possibilities suggested themselves, one being that the wood in question might be one of those that set up a dermatitis. A recent experience in my own family seems to indicate, however, the cause of the rashes that occurred in the Lindfield district. On November 16, near Mosman, three of my children, aged 10, 9 and 7, found about half a dozen pupating caterpillars in flimsy cocoons under the bark near the base of an apple tree (*Angophora lanceolata*). The dry cast skins of the hairy caterpillars were mixed with the slight webbing forming the cocoons. The children gathered the cocoons into boxes. Within two minutes the two elder children complained of irritation on the neck. Shortly afterwards minute urticarial papules could be seen. The children went home hurriedly and calamine lotion was there applied, which eased the irritation considerably. Next day their necks were covered with hundreds of small papules, still very irritating. One of the children, in addition, had papules on the side of the face, accompanied to a certain extent with œdema and swelling of the adjacent eye-lid. In the course of several days the papules gradually disappeared, so that little reaction was visible at the end of a week. A younger child and the two parents who had not handled the caterpillars, later in the evening also developed on the limbs and body a number of small papules, often extremely irritating, which continued to appear in crops for several days. These were attributed to fine spicules being carried in the air, lodging on the clothing or exposed parts and being from time to time rubbed in.

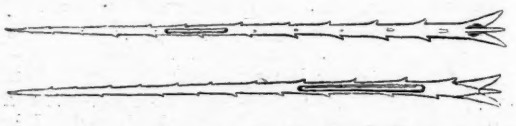
Inquiry has elicited that a number of other instances of similar irritating rashes have recently occurred amongst children, more particularly in the North Shore district. Usually the cases have occurred in boys climbing trees for cicadas and we have heard of such a child apparently conveying the cause of the rash to its parents. Presumably these rashes were also due to the same caterpillars. It seems reasonable to assume that the Lindfield cases probably had the same origin.

On examination of the webbing of the flimsy cocoons they showed entangled in the threads very numerous minute spicules. These are sharp-pointed, acuminate, with a central cavity and measure 85 μ to 172 μ long. The cavity, which appears as if filled with air in mounted specimens, varies from 31 μ to 58 μ in length. The base of the hairlet is 4 μ to 5 μ broad and is surrounded by four backward-projecting clasping barbules, by which the hairlet is additionally supported. Extending forwards, up to and sometimes opposite to the cavity, but not in front of it, are a few smaller backward-projecting barbules arranged in four decussate rows.

When portion of the webbing containing the hairlets is placed on moistened blue litmus paper between two glass slides and these are rubbed over each other, the litmus paper is clearly, but slightly, turned red, no such change affecting blue litmus paper, on which are placed some fibres of cottonwool, after moistening with the same water and handling with the same instruments in the same way. This reaction suggests that an acid, perhaps formic acid, is present in small amounts.

Dr. A. Jefferis Turner has kindly identified the moth for us as *Euproctis edwardsi* Newm., Fam. Liparidæ (Lymantriadæ).

The accompanying drawings by my assistant, Mr. H. V. Justelius, show well the characters of the hairlets.



In various parts of the world, Australia included,[1] caterpillars of the family Liparidæ are known to produce these irritating rashes. I am not aware, however, that this particular species has hitherto been incriminated. The site of the cocoons, under the bark of trees which may be later cut for firewood or other purposes, gives opportunity for injury to human beings under circumstances that may render obscure the cause of the irritation. Our own experience suggests that the hairlets, after aerial dispersion, may remain in clothing for some days and from this position gradually enter the skin.

Reports of Cases.

A CASE OF HYDROCHLORIC ACID POISONING WITH SLOUGHING OF PART OF THE ŒSOPHAGUS.

By **J. Burton Cleland, M.D., Ch.M.**
(From the Microbiological Laboratory, Department of Public Health, Sydney.)

Dr. W. McDonald, of Liverpool State Hospital, has kindly supplied the following details:—

> W.T.S., a male, was admitted on May 15, 1918, having, it is alleged, admitted to poisoning himself by drinking spirits of salts. He progressed favourably for some days, but then had very much greater difficulty in swallowing and great pain and vomiting during the act. On May 24 he vomited a long tubular-shapel slough and next day no difficulty was found in swallowing fluid. The material was submitted to the Laboratory for examination and consisted of a membrane about one foot long tubular in shape and in appearance suggesting part of the œsophagus. One end, apparently the upper, was truncate; the other end, greatly thinned out, was ragged and blackish; the intermediate portion was whitish in colour. The outer surface of the membrane was rather ragged, but the inner side was smoother.

Histological sections showed a degenerated tissue, infiltrated in places with numerous bacteria, in general appearance resembling the œsophagus. Some degenerated striped muscle could be detected on the external surface. Inside this was a loose degenerated tissue, somewhat infiltrated by leucocytes, with occasional wide degenerated vascular spaces and some doubtful bands of unstriped muscle. Lining the lumen was a degenerated layer intensely infiltrated with bacteria. No squamous epithelium was recognizable.

There seems no reason to doubt from the symptoms and from the histological appearance that the membrane vomited

[1] *Proceedings of the Australasian Medical Congress*, 1911 (Sydney), I., p. 549.

up was part of the œsophagus. The presence of some degenerated striped muscle fibres on the outside would indicate that the slough had extended in this part sufficiently deeply to implicate some of the striped muscle attached to the œsophagus. An unexplained point, however, is that, in spite of such apparently gross destructive lesions, the patient should have had relatively little inconvenience and should have made a fairly easy and rapid initial recovery, being discharged on June 12, 1918.

The after-history is interesting. On June 16, 1918, he was admitted to the Royal Prince Alfred Hospital. Dr. Clayton, the Medical Superintendent, has kindly supplied the following details of his stay there. It appears that, since taking the spirits of salts, he had been unable to take any solid food and had lost a considerable amount of weight. He was kept under observation for some time, but it was found that he was quite unable to take sufficient nourishment. Accordingly on June 27, 1918, the stricture of his œsophagus was dilated by œsophageal bougies. His condition improved a little after the operation and he put on a little weight. He was finally discharged on August 15, 1918.

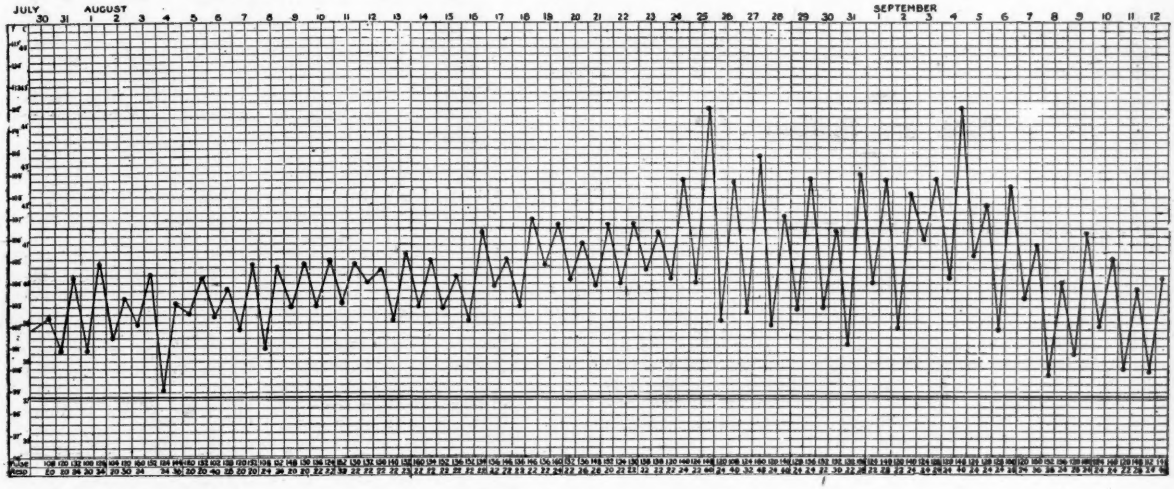
Later he was admitted to Rookwood State Hospital on October 4, 1918. where a gastrostomy was performed by Dr. Nash. He was re-transferred to Liverpool State Hospital on October 14 and died there on October 19, 1918.

A CASE OF NERVOUS OR HYSTERICAL FEVER.

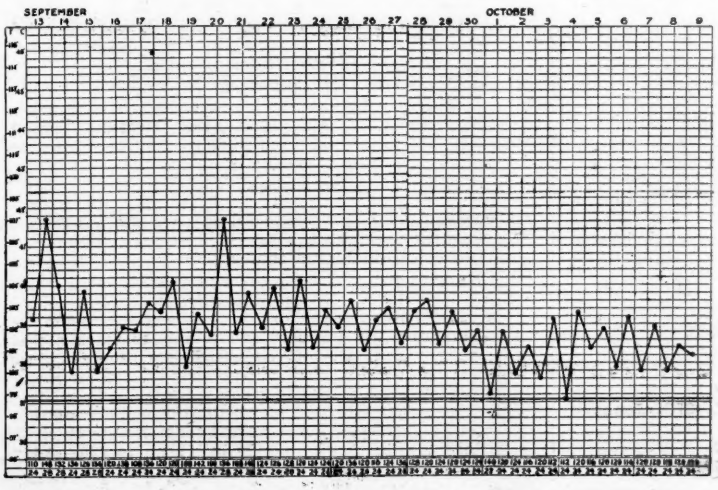
By **Alfred W. Campbell, M.D.,**
Sydney,
and
Norman Dowling, M.R.C.S. (Eng.), L.R.C.P. (Lond.),
Young, New South Wales.

Nervous fever, or as it is sometimes less correctly called, hysterical fever, is a rare condition and by some its occurrence is doubted. Herewith we submit a temperature chart which we think can only be representative of this condition.

The subject is a girl, 23 years old, acutely sensitive, shy, emotional, impressionable and of delicate physique. When this record was made she was under treatment for supposed spinal caries and for close on two years had lain in double Thomas's splints. Her constant complaint was pain over the sacrum and it was accompanied by slight to moderate and irregular elevation of temperature. With the passage of time the pain became more and more intense, causing hysterical outbreaks, while the temperature readings became higher and more constant and culminated in what is next shown.



The chart shows the maximum and minimum morning and evening temperatures and the corresponding pulse and respiration rates. It has been compiled from four-hourly charts.



Our first remark concerning these extraordinary readings, especially those of 44.4° C. (112° F.), is that we believe fraud may be excluded. The records were made by an experienced nurse, the Matron of the Young Hospital, on the alert for dissimulation; also more than once the routine oral reading was supplemented and confirmed by an axillary reading; moreover, in these crises the patient was too prostrate to practice any fraud of which we can think.

We may next state that there was no specific complication, or discovered infection, or other physical condition to associate with and explain such hyperpyrexia.

In regard to the effect of this extreme fever on the patient we offer the following remarks. Weak and frail to begin with, at the height of the pyrexia she lay in a state of extreme prostration, free from convulsive movement, distinctly conscious, resentful of attention and complaining of intense headache. As may be seen in the chart, the pulse and respiration rates did

not increase correspondingly with the outbursts of fever, that is, the temperature of 44.4° C. (112° F.) caused no more increase than the temperature of 41.6° C. (107° F.). In fact acceleration of pulse and respiration was noted more as the fever declined than when it was highest and we may add that the decline of the fever was always attended by profuse perspiration. Lastly, it is remarkable that the patient survived these alarming outbursts of fever and more remarkable still that they passed off leaving relatively slight after-effects.

The subsequent history is illuminating. Apart from other features, the mere fact that the patient survived was sufficient to excite suspicion of a nervous factor. And since X-ray examination, which had previously suggested bone disease, now proved negative, and also since a tuberculin test proved negative, it was decided to open an attack on psycho-therapeutic lines. A masseuse was requisitioned, the splints were removed and anodynes, previously considered necessary to relieve her pains, were promptly suspended. Progress exceeded the best anticipations. The fever rapidly subsided and disappeared. (The only set back occurred on armistice night, when the wave of popular excitement reached her and caused a rise of temperature from 37.8° C. (100° F.) to 41.1° C. (106° F.), an incident confirmatory of the nervous element.) In less than a month she was able to walk short distances with the aid of a stick and in due course left the hospital. For nine months now she has been at home performing household duties, although she still complains of some of the old pain and will not relinquish her stick.

While there are diagnostic points in this case which remain obscure, we think the record justifies the conclusion that nervous fever is a reality.

Naval and Military.

HONOURS.

In our issue of April 12, 1919, we announced the fact that on April 2 Captain Harris Mendelsohn was awarded a Military Cross. The following is a record of the service for which he received this distinction:—

> Captain Harris Mendelsohn, 6th Field Ambulance, Australian Army Medical Corps, attached 21st Battalion, Australian Infantry. During operations in the vicinity of Montbrehain on October 5th, 1918, soon after the attack had been launched, he pushed his aid post forward under heavy shell fire, and established it at a most advanced position. Throughout the day he worked unceasingly, showing fearless devotion to duty, and was the means of saving many lives.

APPOINTMENTS.

The following appointments, etc., have been notified in the *Commonwealth of Australia Gazette*, No. 13, of February 5, 1920:—

Australian Imperial Force.

APPOINTMENTS TERMINATED.

First Military District.

Captain P. J. B. Murphy, 25th October, 1919.
Captain L. M. Pigott, 3rd January, 1920.

Second Military District.

Liuetenant-Colonel W. L. Kirkwood, O.B.E., 17th December, 1919.
Lieutenant-Colonel P. Fiaschi, O.B.E., 23rd February, 1919.
Captain J. H. B. Brown, M.C., 23rd January, 1920.
Captain W. J. Binns, M.C., 8th January, 1920.
Captain R. C. Dent, 27th November, 1919.
Captain G. H. Pfeiffer, 1st December, 1919.

Third Military District.

Major E. E. Brown, 27th January, 1920.
Major W. W. S. Johnston, D.S.O., M.C., 27th January, 1920.
Major P. A. Stevens, 27th January, 1920.
Captain A. W. Le Souef, 2nd October, 1919.

Fourth Military District.

Major J. R. S. G. Beard, M.C., 26th January, 1920.
Captain J. A. Love, 6th November, 1920.
Captain G. H. B. Black, 27th January, 1920.

Fifth Military District.

Captain E. N. Bateman, 13th January, 1920.
Captain A. Clarke, 13th January, 1920.

Australian Military Forces.

APPOINTMENTS, PROMOTIONS, ETC.

Second Military District.

Australian Army Medical Corps—

Captain (Honorary Major) A. T. Dunlop, D.S.O., to be transferred to the Unattached List, 3rd January, 1920.
Major W. H. Read to relinquish the temporary rank of Lieutenant-Colonel, 15th April, 1919.
Major W. H. Read and Captains H. M. North and V. W. Savage, D.S.O., to be transferred to the Reserve of Officers, 16th December, 1919.
Captain, provisionally, A. I. Blue to be transferred to the Reserve of Officers, and be Honorary Captain, 1st December, 1919.

Australian Army Medical Corps Reserve—

The date of appointment of Honorary Captain E. W. Fairfax, as shown in Executive Minute No. 771/1915, promulgated in *Commonwealth of Australia Gazette*, No. 116, dated 25th September, 1915, is amended to read 9th August, 1915.
The resignation of Honorary Captain J. M. S. Levis of his commission is accepted, 24th November, 1919.

Third Military District.

Australian Army Medical Corps Reserve—

Norman Moir Simpson to be Honorary Captain, 24th December, 1919.
Honorary Captain W. B. Heyward to be granted the temporary rank and pay of Major whilst employed as Registrar, No. 16 Australian General Hospital, 6th October, 1919.
Honorary Captain H. S. Forrest to be granted the temporary rank and pay of Major whilst employed as Specialist at No. 11 Australian General Hospital, 13th December, 1919.
The notification respecting the grant of the temporary rank and pay of Major to Honorary Captain R. T. Fetherstonhaugh, which appeared in Executive Minute No. 832/1919, promulgated in *Commonwealth of Australia Gazette*, No. 131, dated 27th November, 1919, is cancalled.
Honorary Captain R. M. Webster to be transferred to the Australian Army Medical Corps Reserve, 6th Military District, 1st December, 1919.

Sixth Military District.

Australian Army Medical Corps Reserve—

Honorary Captain R. M. Webster to be transferred from the Australian Army Medical Corps Reserve, 3rd Military District, 1st December, 1919. (Ex. Min. No. 55.)

A correspondent has forwarded to us a cutting from the advertisement pages of *The Lancet*. He was, unfortunately, unable to trace the date of the issue.

> Nurse wanted for the scarlatina wards of a hospital in a large town. No one belonging to the new school of "trained" nurses need apply. A respectable person who understands her business and is able to teach a probationer; who speaks of the excretions, secretions, functions and parts of the human body in the language of ordinary people; who is cleanly herself and willing to keep her patients and wards in the same condition is most likely to suit. Age from twenty-five to thirty-five. Salary £25, increasing yearly by £1 up to £30.—Address S.F.C., *The Lancet* Office. 423 Strand, W.C..

The Medical Journal of Australia.

SATURDAY, FEBRUARY 21, 1920.

Sera and Vaccines.

Politics and medicine are incompatible. The politician finds it convenient to include in his canvassing campaign promises to improve the health of the community. The people are attracted by proposals to extend hospital accommodation, to provide pre-maternity and infant care centres and to institute clinics for the treatment free of charge of sundry ailments and diseases. As a rule, these platform ideas are relatively harmless, even when they are carried out by persons devoid of technical training. They embrace one grave defect; they lead the public to be beguiled into the belief that the control of disease is safe in the hands of lay persons. Politicians holding ministerial office often allow their political activities to penetrate farther into medical affairs. They make public announcements on matters directly connected with the prevention and treatment of disease which experienced clinicians and pathologists could not support. Political control of public health administration is replete with dangers and pitfalls. One of the worst phases of political insinuation into the realm of medicine is when the Federal Treasurer or the Minister of Trade and Custom spies an opportunity of increasing the exchequer by imposing a duty on substances used in the treatment of disease. The members of the medical profession have recently experienced a taste of the power of the Federal Government to limit their usefulness to the community by imposing restrictions on the importation of a number of medicaments, including bacteriological products and sera. We showed quite clearly, when the importation of these products was prohibited except under licence, that this was in effect an endeavour to establish a partial monopoly for the institute owned by the Government, where bacteriological products are being prepared. The official denial was half-hearted; the explanation did not convince anyone in possession of the facts. It was claimed that the proclamation was issued with the object of preventing the importation of large stocks pending the revision of the tariff. In the first place the majority of bacteriological products have so short a life than no business firm would entertain for one instant the idea of accumulating stocks. The largest and best established firms keep very small stocks indeed or supply the demand by orders transmitted by cable. If the intention of the Government was to exclude from the Australian market products of inferior quality, not conforming to the recognized standards, it would have been an easy matter to instruct the Director of the Commonwealth Serum Laboratories to institute a serum testing station. In the United States of America all bacteriological products are required to pass the standard tests before they can be sold. In the case of diphtheria antitoxin, the certificate is granted to well-known and reputable firms on the guarantee of the antitoxic strength. From time to time the samples are tested and any short-coming is a signal for vigorous control on the part of the Government institution. In Great Britain the high-class firms depend on their reputation. The support given them by the medical profession would be withdrawn at once, were any deterioration in the standard or quality of the products permitted. There should be no difficulty in the exclusion of unsatisfactory sera and vaccines.

We claim that the fear of "dumping" is groundless. But even if it were a possibility, the medical profession would be justified in protesting strongly against the imposition of import duty on substances necessary for the cure of fatal disease. The Federal Government claims to be mindful of the well being of the community and yet is willing to increase the cost of the materials necessary for the treatment of disease. The amount of revenue involved cannot be sufficient to justify a departure from the high ethical plane on which the representatives of the people should stand. On this score, tested solely from a financial point of view, the imposition of a duty is an untenable proposition. Is there any other explanation for the action of the Government in restricting the importation of reliable bacteriological products? We can conceive of none, save the desire to create a monopoly for the Commonwealth Serum Laboratories to enable it to develope commercially at a more rapid pace than if it depended on the ordinary rules of competition.

It is claimed that licences are being granted freely, so that no hardship is being imposed. That may be so in the majority of cases up to the present. There have been no exceptional demands. Should an unexpected outbreak of disease occur, the supply of high-class curative or prophylactic sera or vaccines would probably not meet the demand. Even if a certain amount of elasticity be allowed in regard to the 50% of the products imported during the past twelve months by any one firm, it is certain that medical practitioners who have had reason to place implicit trust in a particular brand of imported serum or vaccine, will sooner or later be compelled to accept another brand because of the inability of the agents to supply what is demanded. There is an American firm of high standing that has hitherto not supplied the Australian market at all. Some preparations of this firm enjoy the confidence of the medical profession in the United States and are regarded as the best of their kind. This firm is seeking admission for its sera and vaccine into Australia at the present time, but owing to the prohibition no licence to import into Australia any of the substances mentioned on the list of the Commonwealth Serum Laboratories can be granted, because none has been imported during the past twelve months. The medical profession should not tolerate any restrictions in their free choice of remedies for disease. This prohibition imposes such a restriction. We therefore urge the Minister in the interests of the community to remove "bacteriological products and sera" from the list of prohibited imports and to discard the intention to impose a duty on these substances.

THE OBJECTIVE OF THE FRIENDLY SOCIETIES.

The ordinary member of a friendly society looks upon the organization to which he pays his regular contributions as an institution enabling him to meet the expenses of certain well-defined eventualities without financial embarrassment. His object in remaining a member is entirely providential. He cares little or nothing for the formalities associated with the guild, nor does he desire to associate his insurance with any political movement. He usually joins at an early age, realizing that the benefits to which he will become entitled will be of inestimable value during the time before he has accumulated anything for a rainy day, and also at a later stage, when his declining powers may necessitate a raid on his savings.

The officials of the friendly societies, their orders and lodges are often tempted to expand the original aims and objects of these institutions. Their offices are surrounded with some degree of picturesque pomp, curiously foreign to a mutual insurance undertaking. In the next place, the fact that the majority of the members are not concerned with the management of the organizations enables the executive to include political activity in the programme. Resolutions of the orders are held to represent the opinions of the members and consequently are pressed on ministers and politicians with all the weight of the numerous voters behind them. The officials and managers of the orders and lodges find it useful to utilize the benefits as baits to secure members, since the membership strength is the index of the power of the organization.

The medical profession has no concern with the manner in which the office-bearers of the friendly societies carry out their duties except in so far as these duties apply to the medical benefit. We have enunciated the principle times without number that the medical profession is prepared to enter into arrangements with the friendly societies to provide medical and surgical attendance at reduced contract rates to persons who are not able to meet the ordinary charges for this attendance. The concession the medical profession is prepared to grant is measured by the means of those claiming it. In the first place, it has to be understood that if the friendly societies are merely political organizations and the members are admitted without regard to their financial position, the offer of concession must be withdrawn or strictly limited to those whose income does not exceed a specified amount. In the second place, the amount of the contribution by members for medical attendance must be determined by the average earnings of the members. In other words, the amount of the contribution will bear a direct relation to the upper limit of the income of the participants. The third condition governing the contract between the medical profession and the friendly society lodges is the recognition of the right of the medical profession to determine the conditions of service. There is a golden rule in medical practice that there may be no intervention of a third party

between a doctor and his patient. Satisfactory relations between the lodge surgeons and the lodge members cannot exist if the executive of the lodges or orders insinuates itself between the parties. The organization exists only as a convenient means of making the concessions practicable. When amicable relations exist between the doctor and his patients, there is no need for intervention of any committee of the lodge or of the British Medical Association. When amicable relations are absent, the patient should have the privilege of changing his doctor.

These considerations have been disregarded entirely by the managers of the friendly societies and their orders in Victoria. The leaders have called to their aid all the political influence they can command to induce the Government to compel the medical profession to relinquish these principles and to enter into agreements that are both undignified and destructive to the best interests of the lodge patients. While they have succeeded to some extent in gaining the ear of the Government, the managers are incurring the displeasure of their own members by neglecting to carry out their insurance obligations. The result of this breach of confidence has been a great falling off of members. The Victorian Branch of the British Medical Association has recently entered into satisfactory arrangements with two friendly societies. The members of these and other societies will recognize in this action the fact that the doctors are prepared to deal fairly with the members of the societies. If the members desire a quick and just settlement of the differences, they will have to insist on the acceptance of the terms set out in the findings of the Wasley commission and on the removal of the medical institutes. It will be obvious to all interested persons that coercion must fail to effect a settlement. The intolerable expedient of using medical officers of health under the Health Act to give attendance to lodge members will create a fresh difficulty instead of removing the old one. The Government will seek reputable medical practitioners for these positions and seek in vain. The recent proposal put forward by the militant executives of the friendly societies to compel the hospital committees to appoint the medical officers of health to positions on the staffs of the hospitals need not be taken seriously. It is inconceivable that the Government will allow the men controlling the friendly societies to dictate so extravagant a piece of legislative folly. Moreover, ministers would need to have some evidence of the effect of the first unprecedented experiment before they would be willing to extend it to the national institutions. In the meantime, the medical profession will wait until the members of the friendly societies have lost patience with and confidence in their representatives. Sooner or later the lodges in Victoria will accept the doctors' agrement, which is similar to the one governing the smooth relations between the lodge surgeons and their patients in the sister State of New South Wales.

THE CREMATION COMPANY OF NEW SOUTH WALES.

In February of last year we announced that a company was being formed under the auspices of the Cremation Society of New South Wales for the purpose of instituting a crematorium in Sydney. The provisional directors of the company included Drs. R. T. Paton, J. Foreman, J. M. Creed and A. L. Kerr. A circular was issued, in which it was stated that an up-to-date crematorium would be erected on a site that had been provided by the New South Wales Government. A small capital was needed and the provisional directors asked for £5,000 in 20,000 shares of five shillings each. The forms of application became available early in March and a considerable number of these forms were distributed from the office of *The Medical Journal of Australia*. Since then eleven months and more have passed. From time to time those who have applied for shares, make inquiries concerning the cause of the delay in carrying the scheme into effect. The provisional directors are enthusiasts and base their advocacy of cremation on hygienic principles. From a business point of view we can confidently state that the investment is a safe one. There is, however, no justification for postponement. If cremation is the proper mode of disposing of human bodies, the means for applying it should be available in our large cities. The public will place confidence in the undertaking when those who have expert knowledge of hygiene, demonstrate that it is sound and practicable. We would urge the provisional directors to make a start at once, so that they may offer to the subscribing public a going concern, not merely an ideal method.

CANNED FRUITS AND VEGETABLES.

Canning of fruits and vegetables, when undertaken commercially, is controlled by the bodies administering the Pure Food Acts of the several States. The sterility of the contents of the vessels can only be tested by the examination of samples selected at random. This testing is not often undertaken by the canning firms. The public health authorities receive information from time to time of the sale of blown tins and as a result of these complaints examinations are carried out and a prosecution may follow. Canning is usually performed commercially in accordance with recognized processes. These processes have been devised on tests which are obviously insufficient to guarantee success in every case. Certain sporing anaerobes are resistant to the effect of heat. It must be remembered that these organisms do not frequently contaminate fruits and vegetables undergoing preservation, but as long as a possibility of their presence in the raw material exists, the process must suffice to destroy them. Commercial processes should be based on the severest tests that can be devised. There is, moreover, a further difficulty to be met in connexion with the tinning or canning of fruits and vegetables. The process is undertaken very frequently in the home and under circumstances which do not admit of any control until a fatal accident occurs. The only way in which the risks involved in home canning can be reduced to a minimum, is to call public attention to any defects that may be ascertained. A general rule may be formulated to the effect that canned or tinned foods of any description should be discarded, if there is the smallest trace of visible spoiling. The economical housewife is but too prone to discard the part of the contents of a tin or can which looks bad and to use that part that appears good. This is so obviously fraught with danger that no warning against the practice can be too urgent. In the next place, all canned goods should be well boiled before use. Should the material include sporing anaerobes of the food poisoning group, they and their toxins are destroyed by boiling.

Drs. E. C. Dickson, G. S. Burke and E. S. Ward have undertaken an extensive investigation into the effect of heat, acid, sugar and the combinations of these agents on fruits and vegetables.[1] The occasional occurrence of fatal cases of poisoning with *Bacillus botulinus*, traced to canned foods, induced these observers to ascertain the effect of heating or the addition of lemon juice on the spores and toxin formation of *Bacillus botulinus* artificially introduced into fruits and vegetables. It was discovered that the spores of this anaerobe frequently survived heating to boiling point for two hours. Sterility was rarely effected when the medium, consisting of mashed brain (animal protein) or mashed beans (vegetable protein), emulsified in normal salt solution and inoculated with *Bacillus botulinus*, was heated to 90° C., 95° C., or even 100° C., for periods varying between fifteen minutes and two hours. In the next place, they prepared peas and beans according to the Cruess method, with lemon juice and brine, and to this was added beef infusion prepared by van Ermengem's formula. The mixture was inoculated with washed bacilli. In this and all other experiments, care was taken to screw the lids tightly after the heating process was completed, in order that the bacteria were enclosed under anaerobic conditions. The mere addition of lemon juice did not destroy the spores, but apparently inhibited the formation of toxin to some extent. When the mixtures were heated, better results were obtained. Heating to 80° C. produced but little effect; heating to 90° C. for fifteen minutes sufficed to kill the bacilli, when 12.5% or 25% lemon juice was added. With less acid it was necessary to prolong the heating or to increase the temperature to 95° C.. Fractional sterilization proved effective, if properly carried out. The canned fruit or vegetable was heated to boiling for one hour on three successive days. The tests were carried out by introducing 1 c.cm. of a suspension of botulinus spores near the centre of the jars. In this connexion it is pointed out that, even after three or four hours, the temperature of the material in the centre of a jar is lower than the temperature at the periphery, if the material is not of fluid consistency. The explanation offered by Bitting is that in solid media there are no convection currents and the broken, homogeneous mass acts as an insulating material. The addition of sugar to the food, even in high concentration, does not prevent the growth of *Bacillus botulinus*, but appears to inhibit the formation of toxin. From these experiments it appears that the methods in ordinary use, both commercially and in the home, are incapable of destroying the spores of *Bacillus botulinus*. While fruit and vegetables are not often contaminated by this organism, the risk cannot be ignored. The organism is widely distributed and the infrequency of contamination cannot be ascribed to any deliberate endeavour to avoid it. The investigators referred to above realize that they have not yet devised a reliable process. It would appear from their experiments that fractional sterilization of fruits and vegetables, acidified with lemon juice, offers the best results. But until these researches have been carried to a satisfactory conclusion, we would urge consumers to discard all glasses, cans or tins of preserved fruits or vegetables that show any signs of spoiling, and, further, to cook these fruits and vegetables in an open vessel to eliminate all risk.

[1] *Archives of Internal Medicine*, December 15, 1919.

THE TREATMENT OF GONORRHŒA.

Public opinion, reflected in the legislation of the land, in the opinions expressed at public meetings and in the views put forward in articles in the lay press, has overtaken the practice of medicine in relation to the prevention and cure of venereal disease. While the average general practitioner is still satisfied to diagnose and to treat gonorrhœa without the aid of a microscope or a set of bio-chemical test tubes, the educated citizen demands the application of modern methods for the purpose of expediting an elimination of infection. The problem of gonorrhœa is an

urgent one. There is an appalling amount of infection in this, as in every other so-called civilized country. Up to recent times no steps were taken to prevent the spread of infection either to the individual indulging in illicit sexual intercourse or to the innocent party to a marriage. Medical practitioners, and especially gynæcologists, admitted a sort of therapeutic bankruptcy and accepted their inability to stamp out a chronic, insidious infection as inevitable. Notwithstanding this sense of helplessness and hopelessness, no desperate measures were adopted to trace the infection and to gain an effective control over it. The medical profession was largely at fault in pursuing haphazard and out-of-date methods. It is possible to establish an accurate diagnosis in every case with the aid of the microscope skilfully used. No medical practitioner can plead the excuse that he is not sufficiently practised in the use of this instrument, for microscopy is taught to every student. The complement fixation test, modified since its introduction by Mueller and Oppenheimer in 1906 to a highly reliable reaction, is an aid to diagnosis and prognosis of such value that it is the business of every practitioner undertaking the care of persons suffering from this disastrous disease to equip himself to carry out the test, or if he is not prepared to do this, to arrange with a colleague who has specialized in laboratory work to perform the test whenever there is anything to be learned from it. In June, 1919, Thomson demonstrated that within certain limits an immunity could be produced in a person suffering from gonorrhœa in any stage by means of a detoxicated vaccine. He showed that if gonococci were dissolved in a weak solution of alkali, a precipitate occurred on the addition of acid sufficient to change the reaction. This stroma, when suspended, is known as detoxicated vaccine. The dosage is measured by the number of gonococci dissolved in the first stage of the preparation. Thomson showed that the antigenic properties of this detoxicated vaccine were considerably greater than were the antigenic properties of ordinary or sensitized vaccines. Moreover, the substance was little toxic, in striking contrast to ordinary gonococcal vaccines. David Lees supported the contentions of Thomson in an article published simultaneously with the original article of Thomson. David Lees has subsequently produced additional evidence of the value of scientifically controlled treatment of acute and subacute gonorrhœa.[1] He recognizes that supplemental treatment cannot be neglected in so uncanny an infection as gonorrhœa. Like other experts, he favours potassium permanganate for the purpose of local irrigations during the acute stage. The addition of carbonate of soda in the strength of one part in 5,000 to a solution of 1 in 8,000 of potassium permanganate has enhanced the efficiency of the irrigations and at the same time soothed the patient. Rest in bed, careful dieting, the exhibition of an alkaline diuretic and good nursing are not merely useful adjuncts to the specific treatment, but are essentials. It is courting failure to ask an antibody to anchor itself on to the antigen, when the latter is imprisoned in closed follicles containing pus within a fibrous prostate. The action of the alkaline solution is to soften the indurated tissues and to open the paths for the antibody to approach the pent-up gonococci. Lees has employed the detoxicated vaccine in 200 cases and claims that the clinical symptoms can usually be removed between the fourth and the fourteenth days. In no case did he experience any complication, while relapses were absent. His patients were kept under close observation and provocative treatment was employed to test the reality of the cure. Within 28 days, after the introduction of 40,000 million gonococci, the antibody content of the serum rose to ten units. When ordinary vaccine was employed the serum did not contain more than 5 or 5½ units of antibody, even as late as the thirty-fifth day. In cases treated without vaccine, the antibody content soon attained a level of about three units and did not exceed four units during the whole period of observation. Moreover, the discharge disappeared in the cases treated with detoxicated vaccines on or before the sixteenth day, while a similar result was unprocurable before the thirtieth day with ordinary vaccine or before the forty-sixth day when no vaccine was used. The antibodies produced in this way apparently persist for about four or five months. Lees suggests that if this fact can be established, the entire disappearance of antibodies six months after the completion of the treatment would be definite evidence of cure and of fitness for marriage. He claims that the antibody in the blood of persons suffering from gonorrhœa increases as the symptoms disappear. The increase is slow, without specific treatment; it is definitely accelerated when ordinary polyvalent vaccines are employed, while it is rapid under the influence of detoxicated vaccine.

[1] *Edinburgh Medical Journal*, August, 1919.

We have been informed that Dr. T. P. Dunhill, of Melbourne, has been appointed Assistant Director of Surgery at St. Bartholomew's Hospital, London. He will leave Australia on May 5, 1920. We join his many friends in congratulating him on his appointment to this important position.

On February 3, 1920, the Medical Council of Tasmania considered a number of documents relating to the diploma of Victor Richard Ratten, in virtue of which he obtained registration in March, 1907. We understand that the Council determined to give Victor Richard Ratten or his representatives an opportunity of examining the documents and of attending a meeting convened for February 17, when the whole matter would be further investigated.

In the *New South Wales Government Gazette*, No. 30, of February 9, 1920, it is officially announced that the Honourable Albert Bruntnell, M.L.A., has been appointed Minister for Public Health of New South Wales.

Our attention has been directed to the fact that a paragraph appearing in last week's issue has been misinterpreted by a few readers. The meaning of the paragraph is that Mr. Richard Thomson, of Castlereagh Street, Sydney, is disposing of his business to Messrs. R. G. Garden and L. L. Hanrahan, who will continue it on unaltered lines. Mr. Thomson informs us that he proposes to give personal assistance to his successors for some months to come.

Abstracts from Current Medical Literature.

THERAPEUTICS.

(65) Atropine, Pyloro-Spasm and Pyloric Stenosis.

Sidney V. Haas (*New York State Journ. of Med.*, October, 1919) in a review of the ætiology of pyloro-spasm and hypertrophic stenosis of the pylorus in infants, concludes that these morbid conditions result from a disturbance of the physiological function of the vegetative nervous system. According to this hypothesis, hypertrophic stenosis is considered as simply an advanced degree of pyloric spasm. Cases of pyloric stenosis of organic origin, in which actual structural changes are present, requiring surgical measures for their correction, are not included under this category. Pyloro-spasm is regarded as the dominant feature of a general state of hypertonicity, the "hypertonic infant" being considered a definite clinical entity, characterized by hypertonicity of all the skeletal muscles. The hollow viscera show increased activity of their smooth muscle fibres, which is an expression of general vagotonia. Colic, visible peristalsis, vomiting, constipation and any combination of these symptoms are attributed to this condition of perverted physiology. It is suggested that the inhibitory impulses of the sympathetic system fail; the vagus, capable of over-action, causes hypersecretion, hyperacidity and hypermotility or pyloro-spasm. The use of atropine is advocated as the rational therapeutic measure, because it paralyses vagus endings. Certain factors are obviously essential in attaining success. In the first place, an active preparation of atropine must be employed and in the second sufficient dosage must be secured. The rapid deterioration of atropine preparations must also be borne in mind. The method of administration recommended is as follows: A solution of atropine (1 in 1,000) is prepared. The initial dose is one drop, or 0.0006 grm., and is put into the feeding-bottle if the child be bottle-fed, or given in a teaspoonful of water immediately preceding a feed if the infant be breast-fed. If no idiosyncrasy to the drug exist, the dose at the next feeding is two drops, this dose being continued with each feed during the next twelve hours. If there be an entire absence of improvement, a larger dose may be used, up to three or four drops, with each feeding. Atropine must be continued for a variable time, in some cases only a few weeks, in others for many months. Reduction of the dose or its entire omission demonstrates that it is no longer necessary. Toxic symptoms and evidence of physiological saturation, such as flushing of face and body, mydriasis, dryness of mouth and lips, irritability, pallor, drowsiness are to be carefully watched. "Hypertonic infants" generally tolerate unusually large doses of atropine safely, 0.0012 to 0.0025 grm in 24 hours being frequently ingested by an infant a few weeks old.

(66) The Action of Arsenic and of Quinine in Quartan Malaria.

The relative values of organic preparations of arsenic and of quinine administered in cases of malarial infection have been investigated by Stephens, Yorke, Blacklock and Macfie (*Annals Tropical Med. and Parasit.*, July 31, 1919). Two intravenous injections of novarsenobillon, 0.9 gramme, given at an interval of approximately a week, were found to have had no appreciable effect, either on the temperature or the parasites in quartan infections. Following this two intramuscular injections of quinine bihydrochloride, 1.0 gramme, were given on two consecutive days. It was found that a remarkable difference exists in the action of novarsenobillon and of quinine on the three species of malarial parasites. The action of novarsenobillon on *Plasmodium vivax* is marked. In this infection its action is even more rapid and efficient than that of quinine, a simple intravenous injection of 0.9 gramme causing the disappearance from the peripheral blood of all stages of the parasites within 24 hours. In the case of infection by *Plasmodium falciparum* or by *Plasmodium malariæ*, novarsenobillon in the same dosage has no appreciable effect on the temperature or on the parasites. An intramuscular injection of one gramme of the bi-hydrochloride of quinine, given on each of two consecutive days, exerts, in the case of *Plasmodium vivax*, a constant and rapid effect, both on the temperature and on the parasite. In infections of *Plasmodium falciparum* the action on the temperature and trophozoites is also well defined, though relapses occur more quickly than in the case of *P. vivax*. In infections of *Plasmodium malariæ* treated in the same way little effect on the parasites is noted, but in 50% of the cases investigated the temperature was controlled. In simple tertian malaria (*Plasmodium vivax* infection) a combination of treatment by novarsenobillon and quinine is more effective than either novarsenobillon or quinine alone. Quitenine hydrochloride was found to be of no value in the treatment of simple tertian malaria.

(67) Bilharzial Disease Treated by Antimony.

G. C. Low records a case of successful treatment of bilharzial disease by intravenous injections of tartar emetic (*Journ. Tropical Med. and Hygiene*, May 15, 1919). The patient contracted the disease in 1905 in Natal. He had much hæmaturia, with clots. Male fern did some good. Finally the blood disappeared and the symptoms quietened down and then disappeared. After this he had no further symptoms till he went from Egypt to Salonika in 1916. Blood then began to appear in the urine occasionally, with pain in the back. He was not incapacitated and was passed as fit for general service in France. Here his symptoms became steadily worse and he was invalided to England in May, 1918. Examination revealed a well-developed man, 29 years of age. At the end of micturition, by straining a little to exude the last drops of urine, blood would appear, accompanied by some terminal-spined bilharzia ova. A table is given, showing the results of the examinations and treatment. The intravenous dose of *antimonium tartaratum* was increased from 0.03 grm. to 0.06, 0.09 and 0.12 grm. at intervals of from three to four days. The total injected was one gramme. Treatment began on March 6, 1919. The hæmaturia disappeared on March 18. From that date it became difficult to find any eggs. The last egg (dead) was found on April 7. The injections were stopped, as the patient began to complain of a constricted feeling over the heart after the 0.12 grm. doses. As he appeared to be cured there did not seem to be any object in continuing the injections. As far as can be judged at present, antimony seems to have a toxic effect on the bilharzial adults and possibly kills them and so brings the infection to an end.

(68) Modern Treatment of Diabetes.

H. R. Geyelin reviews the therapeutic results which have been obtained with the Allen treatment of diabetes and gives illustrative cases, with a series of charts (*Journ. Amer. Med. Assoc.*, October 18, 1919). He concludes that diabetes in its severe and acute form is not limited to the first three decades of life, but may be found at any age, although it is rare in persons over 30. In his experience, it was more common between 50 and 70 than between 30 and 50. Absolute adherence to the diet is essential to a maximum degree of successful results in treatment. Without there is no hope, unless the diabetes is very mild; even when it is mild, there is great risk of it becoming severe. Fast days and half days are of great help in treatment of the majority of patients, but are not necessary as routine measures in all cases at all times. It is wise for a patient under treatment to realize that he is not a normal person on a normal diet and to regulate his mental and physical activities and, therefore, his caloric output by his caloric intake. Exercise should be advised only in exceptional cases and in proportion to the amount of energy afforded by the caloric intake. Rest, rather than exercise, should be urged. Long-continued diets overbalanced in fat (180 grm. and over) are harmful and their harmful effect is insidious. Apart from their immediate effects in the production of acidosis and glycosuria, they have a depressing effect on tolerance. This effect is overcome only by long periods of low caloric intake. There is no cure for diabetes; but there is a greatly improved method of treatment, particularly as regards prolongation of life and the avoidance of surgical complications.

UROLOGY.

(69) Ascending Renal Tuberculosis.

Leo Buerger (*Americ. Journ. Med. Sciences*, October. 1919) states that, though there is a consensus of opinion to-day regarding the incidence of primary renal tuberculosis with secondary descending infection of the ureter and the bladder, authentic cases of primary involvement of the distal portions of the urinary tract do occur, though rarely. He presents clinical and pathological observations of his own to prove it. He also cites cases reported by other observers. These include Wildbold's case of tuberculosis of the bladder, ureter and pelvis of the kidney, without any lesion in the parenchyma of the kidney, Hottinger's case of extensive involvement of the bladder and prostate, while the left ureter was involved at the lower extremity, although the renal pelvis and parenchyma were healthy, Rovsing's six cases, in which he found dilatation of the ureter and pelvis of the kidney above a tuberculous stenosis of the lower end of the ureter, with progressive development of the lesion from below upwards. In these cases the cause of the ureteral stricture varied, the primary focus being situated in the prostate, with secondary involvement of the bladder and the ureter. As a foundation for his arguments the author states that it has been proved that chronic renal tuberculosis has its inception most frequently in the medulla. In some cases it begins in the boundary zone between the cortex and medulla and in the renal papillæ. The foci which develope in the medulla, seem to emanate from lesions of one papilla or in the transitional region between the calyx and papillæ. He records a case of tuberculosis of the bladder and of the right ureter. There were minimal changes in the right kidney. Tubercle bacilli were obtained from the bladder and the right kidney. The vesical symptoms and tubercle bacilli disappeared spontaneously from the urine after nephrectomy. There was no macroscopical lesion found in the kidney after removal, indicative of primary tuberculosis, but miliary tubercles, without cheesy degeneration and not communicating with the pelvis, were present. He claims that this case furnishes sufficient data to support the view that the involvement of the kidney was secondary to a process lower down in the urinary tract. Whether the renal lesions were embolic or ascending in the true sense cannot be determined. It was evident that they were of more recent date than the bladder lesion. The cause for the clearing up of the bladder condition and the disappearance of the bacilli is obscure. He suggests that, by reason of the tuberculous involvement of the distal part of the ureter and the marked relaxation and insufficiency of the vesical orifice, a certain amount of reflux occurs regularly. Stagnation in the ureter follows, so that tubercle bacilli are present in the pelvis rather as a result of reflux than of secretion through the kidney or of the breaking down of the tuberculous focus in the kidney itself. By the removal of the kidney and a large part of the ureter this pouch, in which bacilli could be secreted and retained, was eliminated and the bladder was then able to take care of itself. He also records a second case, in which there was extensive ulcerative tuberculosis of the bladder and left-sided pyuria. Tubercle bacilli were discovered in the urine from the left kidney and also in the bladder. The patient was suffering from marked frequency of urination, dysuria, with occasional attacks of pain in the left hypochondriac region. Nephrectomy was performed and a somewhat hydronephrotic kidney, with tuberculosis of the pelvis, was removed. The parenchyma was free, except for a few miliary tubercles. Careful examination of all the papillæ and the cortex revealed no evidence of tuberculosis. Seven or eight miliary tubercles were found beneath the capsule. The interior of the pelvis was diffusely tuberculous, especially in a distal direction. The patient made an uneventful recovery after nephrectomy.

(70) Stricture of the Urethra.

C. O. Files records the case of an alcoholic who had had several attacks of gonorrhœa (*New York Med. Journ.*, November 15, 1919). The patient had been catheterized many times on account of sudden inability to urinate. One day 35 years ago he had slept out of door in cold and damp weather in an intoxicated condition. As he could not pass urine, he went first to one and then to another medical practitioner, both of whom recommended admission to a hospital. When the author saw the patient, it was obvious that it would be inadvisable to renew the attempt to pass a catheter. The bladder was tense and the patient's general condition was bad. He was given repeated doses of opium and ipecacuanha, until he had had 0.48 gramme of opium. He then emptied his bladder completely, making a moderately good stream. He recovered from the effects of the opium. Thirty years later the author saw the man again. His general condition was unaltered, but he claimed that he had had no further attacks of urinary trouble. It is not suggested that the opium given during the attack had effected a cure of the stricture.

(71) Syphilis of the Epididymis.

H. E. Michelson claims that syphilitic involvement of the epididymis is not the rare condition it is usually held to be (*Journ. Americ. Med. Assoc.*, November 8, 1919). Although very few articles dealing with this condition have been published, the author has collected sufficient material from the recorded cases and from his and Franklin R. Wright's experience to justify a distinctive classifiation. He recognizes three forms: (*i.*) an acute, diffuse, interstitial syphilitic epididymitis, (*ii.*) a chronic, diffuse interstitial form and (*iii.*) a gummatus, circumscribed form. The acute diffuse interstitial type may occur in the second month after infection, although Gosselin states that it does not develope before three and a half months. It may be seen as late as the fifth year. In Zeissl's case it was coincident with a papular syphilide. The swelling is uniform at first, elastic and smooth. Later irregular indurations occur. The enlargement is slightly painful and may be associated with hydrocele. After the acute stage passes, the hydrocele clears up and the epididymis is felt to be irregular, elastic and hard. Later atrophy may supervene. The testis is rarely involved. It is not frequently bilateral. The second type is a slow, insidious, chronic diffuse process, affecting the connective tissue. It is painless until the dragging caused by the weight of the enlarged organ causes uncomfortable sensations. The induration is usually confined to the upper pole, although the entire epididymis is often involved. Hydrocele results from the implication of the *tunica vaginalis*, which is much thickened. The hydrocele fluid is said to yield a negative Wassermann reaction. The gummatous variety is a late manifestation of syphilis. It is, however, not so late as is gumma of the testis. Several small nodules, varying in size from that of a bean to that of a hazel nut, develope independently of one another. The process is chronic. There may be precedent history of injury. Gumma of the epididymis may also be secondary to gumma of the testis. The author appends several short summaries of cases illustrating the types of syphilitic involvement of the epididymis.

(72) Malakoplakia of the Bladder.

In 1903 von Hansemann described a condition which he termed malakoplakia, consisting in multiple nodular tumours invading the mucous membrane of the bladder. The condition is rare. Some pathologists have claimed that it is of a tuberculous nature, while others have denied any ætiological relationship between the condition and tuberculosis. A. I. Folsom records two cases in which there was no history of tuberculosis (*Journ. Amer. Med. Assoc.*, October 11, 1919). The first patient was a woman, aged 43, who appeared to be in good health. There were 300 c.cm. of residual urine similar to that associated with prostatic hypertrophy. In the trigone and adjacent areas at the base of the bladder there were many irregularly placed, smooth, rounded nodular tumours. Some were pedunculated and others had broad bases. The histological structure of one of the tumours removed for the purpose suggested a medullary carcinoma. Further study, however, revealed that the tumours were not malignant and consisted chiefly of an accumulation of endothelial cells. Fulguration sufficed to bring about a disappearance of the growths. The second case was similar and responded to treatment. Although Folsom did not carry out a tuberculin test, he made careful inquiries into the family history and examined his patients minutely for any traces of tuberculosis. He feels justified in concluding that tuberculosis was not an ætiological factor in either of his cases.

British Medical Association News.

MEDICO-POLITICAL.

A meeting of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on February 4, 1920, Dr. John Gordon, the Vice-President, in the chair.

The chairman welcomed the following members on their return from active service abroad: Lieutenant-Colonel R. W. Chambers, D.S.O., Lieutenant-Colonel T. E. V. Hurley, C.M.G., Major E. M. Allester, Major Donald Bennett, Major J. V. H. Guest, *Croix de Guerre*, Major F. E. Hutchinson, Major Alan B. McCutcheon, Major K. A. McLean, M.C. and Bar, Major W. B. Ryan, Major P. A. Stevens, Major J. W. Wilkinson, Captain P. J. Campbell, D.S.O., Captain L. B. Cox, Captain H. Crawford, Captain A. J. Day, Captain H. C. Disher, Captain B. D. Fethers, Captain E. N. H. Gandevia, Captain D. P. Greenham, Captain T. M. Hendry, Captain H. S. Jacobs, Captain J. R. Jagger, M.C., Captain F. H. James, M.C., Captain J. J. Kelly, Captain R. F. Le Souef, Captain H. F. Maudsley, M.C., Captain F. R. Meagher, Captain F. J. B. Miller, Captain Neil McColl, Captain K. C. Purnell, M.C., Captain D. G. Robertson, Captain J. R. Robertson, Captain J. L. Ross-Soden, Captain J. E. Shelley, Captain A. E. Taylor and Captain W. G. H. Tregear.

The Honorary Treasurer presented the annual balance sheet of the Victorian Branch of the British Medical Association, the annual balance sheet of the Medical Society of Victoria and the annual balance sheet of the Medical Agency conducted by the Medical Society of Victoria. In regard to the last named document, he pointed out that the Agency had the sum of £532 6s. 4d. in hand and that there were no outstanding liabilities.

The statements were received.

BRITISH MEDICAL ASSOCIATION (VICTORIAN BRANCH).

Revenue and Expenditure Account for Period from January 18, 1919, to January 15, 1920.

Expenditure.

	£	s.	d.
To Medical Society of Victoria	1,393	17	0
„ *British Medical Journal*	892	7	6
„ Postage, Duty	42	18	7
„ Printing	32	10	5
„ Stationery	13	9	3
„ Clerical Assistance	5	14	0
„ Commission (New Members)	1	10	0
„ Advertisements	9	1	3
„ Audit, 1918	2	2	0
„ Travelling Expenses	0	13	9
„ Sundries and Telephone	7	1	7
„ Repairs	2	6	9
„ Bank Charges	1	18	8
„ Balance in Bank	349	17	10
	£2,755	8	7

Liabilities.

	£	s.	d.
To Balance, as above	349	17	10
	£349	17	10

Revenue.

	£	s.	d.	£	s.	d.
By Balance, January 17, 1919				265	11	6
„ Subscriptions—						
Metropolitan Members	£1,432	5	6			
Country Members	895	3	3			
Junior Members	145	0	0			
Adjustment, Queensland	0	17	3			
Rebate (London)	1	6	0			
	2,474	12	0			
Less Refund	4	11	0			
				2,470	1	0
„ Post-Graduate Classes				19	11	3
„ Interest of Deposit, Commonwealth Bank				0	4	10
				£2,755	8	7

Assets.

	£	s.	d.
By Bank of Victoria, Ltd.	238	6	4
„ Commonwealth Bank of Australia, Credit Balance	8	11	6
„ Trustees, Organization Fund	100	0	0
„ Petty Cash in Hand	3	0	0
	£349	17	10

Audited and found correct,
(Signed) A. V. M. WOOD & CO., F.F.C.A.,
Melbourne, February 3, 1920. Auditors.

(Signed) C. STANTON CROUCH, Secretary.
C. H. MOLLISON, Honorary Treasurer.

MEDICAL SOCIETY OF VICTORIA.

Revenue and Expenditure Account for Period from January 18, 1919, to January 15, 1920.

Expenditure.

				£	s.	d.
To *The Medical Journal of Australia*				773	10	0
„ Salaries—						
Secretary	£412	0	0			
Library Clerk	36	0	0			
Caretaker	26	0	0			
				474	0	0
„ Library—Journals and Binding				25	11	6
„ Postages, etc.				42	8	5
„ Rates, Taxes and Insurance				11	14	11
„ Telephone				17	0	5
„ Light and Power				5	14	11
„ Audit for 1918				3	3	0
„ Bank Charges				1	4	6
„ Repairs				10	3	0
„ Sundries				1	17	0
„ Balance in Bank of Victoria, Ltd.				129	16	11
				£1,496	4	7

Revenue.

	£	s.	d.
By Balance, January 17, 1919	26	1	7
„ Subscriptions	1,393	17	0
„ Sale of Furniture	2	10	0
„ No. 1 Dividend, Australasian Medical Publishing Company, Limited	73	16	0
	£1,496	4	7

Audited and found correct,
A. V. M. WOOD & CO., F.F.C.A.,
Melbourne, February 3, 1920. Auditors.

(Signed) C. STANTON CROUCH, Secretary.
CRAUFORD H. MOLLISON,
Honorary Treasurer.

The following circular has been sent to the members of the Victorian Branch by direction of the Council:—

February 6, 1920.

Dear Sir,—It has come to the knowledge of the Council that the resolutions of the Victorian Branch of the British Medical Association, designed to protect the practices of members on active service ,are in some cases not being carried out.

This Council again draws the attention of all members to their obligations to returned medical officers when they resume their practices.

The Council considers it essential that the undertaking be carried out and desires that you will go into your personal action in the matter.

The following is a copy of resolutions adopted by the Council of this Branch, June 10, 1915, and governing this matter:—

"1. Lodge patients transferred from the lists of an absentee on military service to those of another practitioner should not be retained by the latter at the close of his military service.

"2. Any appointment necessarily vacated by reason of absence on military service should not be retained by the successor at the conclusion of such military service.

"3. Any medical man who is acting for an absentee on military service, should be remunerated fairly for his services, due regard being paid to the expenses and the net profits of the practice during the absence of the medical man on military service.

"4. With a view to conserving the interests of those members of the Branch who undertake military or naval service during the existing state of war, the rest of the members should individually engage, in the event of being called upon to fill their positions or attend their patients, to restore the same to them upon their return to civil practice so far as it may be in their power so to do.

"5. The Council requests members to exercise a scrupulous regard for the just interests of practitioners absent on military service, and particularly so in the case of those who have not been able to obtain a locum tenens nor to provide for the sale of their practices."

Yours faithfully,

C. STANTON CROUCH, Secretary.

The undermentioned have been nominated for election as members of the New South Wales Branch:—

William Hunter Watson Cheyne, Esq., M.R.C.S. Eng., L.R.C.P., Lond., 1913, Bank of Australasia, Pitt Street, Sydney.

Augusto Braccer, Esq., M.D. (Univ. Parma), 1900, c/o. Richard Thomson, Esq., 15 Castlereagh Street, Sydney.

Medical Societies.

(Affiliated with the British Medical Association.)

THE NORTHERN DISTRICT MEDICAL ASSOCIATION (NEW SOUTH WALES).

The annual meeting of the Northern District Medical Association (New South Wales) was held on January 28, 1920, at Tattersall's Hotel, Glen Innes, Dr. L. M. Snow, the President, in the chair.

The Honorary Secretary and the Honorary Treasurer read their annual reports. The reports were adopted.

It was resolved on the motion of Dr. A. J. Corfe, seconded by Dr. W. E. Harris, that the Honorary Secretary be instructed to seek the co-operation of the other local medical associations in New South Wales for the purpose of modifying the arrangements for representation on the Council of the New South Wales Branch of the British Medical Association. The meeting desired that each local association should have a representative, who should have the right to vote as well as to speak at meetings of the Council.

It was moved by Dr. W. E. Harris, seconded by Dr. A. J. Park and resolved:—

That, in the opinion of this association, Dr. Pockley's scheme of insurance is impracticable.

The following were elected office-bearers and members of the Committe:—

President: Dr. A. J. Corfe.

Vice-President: Dr. A. J. Park.

Honorary Secretary and Honorary Treasurer: Dr. E. W. Buckley.

Honorary Auditor: Dr. J. P. Sexton.

Members of the Committee: Drs. R. Balls, J. S. F. Barnet, T. S. Douglas, R. M. Farrell, H. L. Harris, W. E. Harris, W. E. Kay, R. M. Kinross, J. Mackenzie, T. P. McKell, B. L. Middleton, E. L. Newman, W. Ritchie, R. Roger, L. M. Snow, G. P. Stanley, F. S. Stuckey, M. M. Vernon and E. A. Woodward.

It was determined that the appointment of the delegate of the Association to the Council be left in the hands of the Committee. Similarly, the appointment of a representative to serve on the Council was left to the Committee.

Dr. H. Scott, on behalf of Dr. C. H. Scott, read a paper on a question of medical ethics.

Dr. J. P. Sexton read a paper on *spina bifida* and illustrated his remarks with photographs. A discussion ensued, in which Dr. W. E. Harris, Dr. A. J. Corfe, Dr. F. S. Stuckey, Dr T. S. Douglas, Dr. H. L. Harris, Dr. A. J. Mackenzie and Dr. E. A. Woodward took part.

Dr. E. W. Buckley read a paper on the perforation of a duodenal ulcer. Dr. W. E. Kay, Dr. W. E. Harris, Dr. A. J. Park, Dr. C. C. Coghlan, Dr. T. S. Douglas and Dr. A. J. Corfe took part.

A vote of thanks was accorded the readers of the papers.

The visiting members were well entertained by the Glen Innes members.

COMMISSIONS IN THE R.A.M.C. FOR AUSTRALIAN MEDICAL OFFICERS

The Military Authorities have received the following letter from the War Office, London, dated July 12, 1919, dealing with the offer of the War Office to give a commission in the Royal Army Medical Corps to two members of the Australian Army Medical Corps:—

I am commanded by the Army Council to inform you that they have under consideration the question of the grant of the permanent commissions in the Royal Army Medical Corps to officers of the—

New Zealand Medical Corps.
Canadian Army Medical Corps.
South African Medical Corps.
Australian Army Medical Corps

and have decided that two such commissions shall be offered to each Dominion.

I am to request, therefore, that the Government of the Commonwealth of Australia may be asked if they will be good enough to nominate two officers whom they consider worthy of these appointments on account of good service rendered during the war, and whose moral, social and professional qualifications are of the high standard required of candidates.

The officers nominated should be examined by a Medical Board and be fit for general service at home or abroad. They must be under 28 years of age, but approved candidates will be allowed to deduct from their age the period of their mobilized service, if such deduction will bring them within the age limit.

The candidates will be required to forward to this office their birth certificate and Medical Registration Certificate and a statement of their mobilized service should be forwarded.

I am to add that as a special case the officers approved for the grant of Imperial Commissions will be allowed to count their mobilized service during the war as service towards promotion, half-pay and retired pay, as officers of the Royal Army Medical Corps.

A new intermediate hospital in Melbourne will be opened on February 27, 1920. The institution is under the auspices of the Methodist Church.

Obituary.

NICHOLAS MICHAEL O'DONNELL.

In a recent issue we regretfully announced the death of Dr. N. M. O'Donnell, of North Melbourne, Victoria.

Nicholas Michael O'Donnell was born at Bullengarook, near Gisborne, Victoria, in 1863. He received his early education at St. Patrick's College and graduated in medicine at the Melbourne University in 1881.

For the whole of his professional life he was associated with North Melbourne; he commenced practice in Canning Street, whence he removed to Victoria Street of the same suburb in 1886. There he remained and followed his chosen career of general and family practitioner for the lengthy period of 33 years, the last five of which he was compelled to live very quietly, on account of impaired health.

Nicholas Michael O'Donnell was large-hearted, earnest, kindly and charitable to a degree of which only his erstwhile circle of patients and friends are fully aware; in the suburb in which he practised for so long he found many opportunities for the exercise of the natural kindliness with which he was abundantly endowed. He was of the type of family practitioner who becomes not only the physician, but the confidant and friend of his patients. A devout Roman Catholic, he led an upright and sincere life and gave largely of his talents and means to the Church to which he was devoted.

Nicholas Michael O'Donnell was a man of many parts and derived a keen pleasure from developing various tastes and hobbies. At one time he took an ardent interest in astronomy; later in life he became an expert amateur photographer and has left an artistic collection of prints illustrative of his various travels. Early in life he figured in the political world as an advocate of the cause of Home Rule and was a member of the committee which met the Messrs. Redmond in 1882. For nearly 20 years he was chairman of the United Irish League in Victoria and when ill-health compelled his retirement from public affairs, Nicholas O'Donnell came to be known as a scholar, identified with the Historical Society. He devoted considerable time to the study of early Victorian history; his best known contributions to the Historical Society have been published in book form, notably, "The Pioneers of the Sunbury District" and "The Australian Career of Henry Fyshe Gisborne."

His studious mind also mastered the exceedingly complex Gaelic language. He leaves an excellent library, essentially the collection of a man of cultivated tastes.

Nicholas Michael O'Donnell's wife predeceased him in 1912 and a family of three sons and one daughter, the wife of Mr. F. Brennan, M.H.R., survives him. The youngest son, at a very early age, displayed exceptional musical talent and is at present in London pursuing his study of the violin, having been awarded the Clarke Scholarship of the Melbourne University three years ago.

Thus has passed Nicholas Michael O'Donnell, physician, politician, man of letters, but, above all, a friend of his fellow-man.

VENEREAL DISEASES.

Tasmania.

The Department of Public Health of Tasmania has received the following notifications of cases of venereal disease during the second six months of the year 1919:—

	Males.	Females.	Total.
Gonorrhœa	166	19	185
Syphilis	34	11	48
Chancroid	7	1	8
All Venereal Diseases	207	31	238

Correspondence.

GASTRO-INTESTINAL INFLUENZA?

Sir,—For the last three years I have had sporadic cases in various suburbs of Melbourne of a gastro-intestinal affection, which coincided in the main features of their symptoms. During the late influenza epidemic this series of symptoms, unchanged, became much more frequent and since it has gone, they are still fairly prevalent. I can find no record of it, although it is a perfect nuisance in the treatment of chronic diseases and sometimes in those of more acute character by coming in and complicating the conditions present. The symptoms differ materially in their severity and vary from a feeling of malaise to serious and sometimes fatal vomiting and dysenteric diarrhœa.

The patient complains of pains all over the body, generally of short duration, and like any of the other symptoms, this may scarcely be present. He has generally what one patient described as a "fuzzy" head. Then there are flushings of heat and waves of nausea, although in mild cases the patient can take his meals fairly well. There is a characteristic nausea which is accompanied by a sense of faintness, suggesting that the end of all things for the patient has come. In some there is distinct gastric vomiting, with loss of appetite.

In the intestine, mostly colon, there is well-defined griping, with frequent desire for stool. This also varies from merely a sense of something present in the rectum which cannot be got rid of, to a frequent stool of mucus and wind and on to a severe dysenteric diarrhœa, sometimes with bloody stools. This feeling of something present in the rectum suggests constipation to some of the patients and they are partially relieved by aperients. It is most persistent and, untreated, may continue sometimes mildly, again with sharp exacerbations for weeks and even after it has been cleared up by appropriate treatment, it is apt to reappear at intervals later on.

For want of a better name I have to my patients called it gastro-intestinal influenza and the only treatment which seems to reach it is the following prescription.

℞—

Sod. salicylatis, 7.00.
Lig. hydrarg. perchlor., 14.00.
Mist. pepsin, co. cum bism., 42.00
Ag. menth. pip., ad 240.00.

Sig.—One tablespoonful four times a day.

In my experience this treatment has proved specific and I have not had to vary it.

I have seen a temperature of 38.3° C., but generally there is little alteration in pulse or temperature. My experience is at once personal and from not less than two hundred other cases.

Yours, etc.,
D. MONTGOMERIE PATON, L.R.C.P. *et* S., Ed.
156 Collins Street, Melbourne,
January 27, 1920.

STATE CONTROL OF VENEREAL DISEASES.

Sir,—There is no doubt that future syphilographers will regard that great meeting which took place at the Albert Hall in 1913, to discuss and vote upon the two resolutions afterwards solemnly put by the Chairman, Sir Malcolm Morris, as an historic occasion. It will therefore act as a stimulus to the renewed development in the handling of the venereal diseases question if we reflect briefly upon what took place at that great gathering, where were assembled in large numbers the most eminent authorities on syphilis of the day, both British and foreign, to voice opinions and give experiences which, being of the highest value, were successful in guiding public opinion and legislative action to the handling of the venereal diseases question as we know it to-day. Amongst those present were Professor Blaschko, of Berlin, who is regarded as one of the most experienced syphilologists on the Continent and who, with Professor Neisser, of Breslau, formed the National Society for the Prevention of Venereal Diseases in Germany in 1902, a society consulted by legislature in all matters relating to venereal diseases. He stated that, in his opinion, the regulation of prostitution had not proved an effective means of diminishing syphilis and gonorrhœa in any country, chiefly because the most dangerous kind of prostitute, the young woman of 18 to 25 years, was seldom crippled by her malady and could easily conceal her infectivity and that it was often forgotten that men represented a larger and therefore more dangerous source of infection than women. He also ex-

pressed the opinion that it was the duty of a bureau of public health to control and administer the public morality. Professor Blaschko, who was the first to speak, sounded the note which rang through the fifteen authorities who followed him. Professor Finger, of Vienna, who followed Professor Blaschko's eloquent pronouncement on similar lines, expressed very emphatically the opinion that prudery must vanish before a sensible discussion of the whole subject could take place, and he laid particular stress on the importance of forcing the patient to realize the great danger he was to the community as long as he remained untreated, that reform in education of the public was absolutely necessary and that everywhere the treatment of venereal diseases was far too short, chiefly for want of funds. Professor Leredde, of Paris, confined himself to a recital of the various ways syphilis affected the human organism, instancing the organs of special senses. He believed it to be the most potent cause of abortions, still-births and infant mortality. Dr. Dundas White, of London, referred to the astounding fact that 500,000 fresh cases of venereal disease occurred annually in England and of those one-third was syphilis. Dr. Ernest Lane, of the London Lock Hospital, whose experience runs back to 1878, urged the importance of educating the public schoolboy, whose first infection occurred from ignorance of the horrible risk he ran.

Dr. Woods Hutchinson, of New York, who was one of the most notable speakers, laid stress on the absolute necessity of prefacing all hygienic measures by a determined attempt to break up the ring of organized and "respectable" exploiters, who had made and were still making their fortunes out of the feeble-minded and indigent among women and the temporary frailties of man. That, he said, was the true "spring" of prostitution—not the sexual impulse. Much indeed would be wanting if I omitted to give somewhat in detail the eloquent appeal made by the Chairman, Sir Malcolm Morris, when bringing the discussion to a close. He said that a thorough official investigation of the subject was the prerequisite of any effectual action on the part of the State to deal with what Lord Morley had described as "this hideous scurge." The facts had to be elicited, the vast prevalence of the disease, the ease with which it could be communicated, the enormous number of those who were its innocent victims, its grave consequences unless promptly and effectually treated, the means now available for its proper diagnosis and treatment and the utter inadequacy of existing facilities for making use of those means; that of these facts the general public were almost entirely ignorant and they were most imperfectly appreciated even by our legislature. He said that these facts should be placed upon authoritative record and then they must be pressed upon the notice of all who claimed to be in any sense leaders and teachers of the people—statesmen, politicians, the judiciary and magistracy, the press, the clergy, the teaching professions and the members of local government authorities; that an end must be put to the silence in which the subject had too long been shrouded. Whilst the nation had slept, the enemy had been sowing his tares. What a monstrous, staggering anomaly it was that we were confronted with! The State enforced the notification of many infectious diseases, took charge of the insane, encouraged building of fever hospitals, carried out rigid inspection of factories, workshops and in a thousand ways stretched out its long arm to safeguard the health of the community. Yet it did not lift a finger to protect the nation from a devastating disease which, more ruthless than the destroying angel who slew the first-born, smote the unborn babe. The resolutions submitted, he concluded, embodied the irreducible minimum of what they had a right to call upon all civilized governments of the world to do.

Out of the resolutions unanimously carried at this conference evolved all that is being done to-day. What is Australia doing?

Yours, etc.,

RICHARD JONES.

110 Collins Stret, Melbourne,
December 15, 1919.

RHEUMATISM AND SEPSIS.

Sir,—In Dr. Macdonald Gill's article on acute rheumatic heart disease he states: "I do not mean to suggest that in rheumatism an outside factor is at work." Does he include all forms of rheumatism—myositis, arthritis and so forth—or does he limit rheumatism to acute heart disease? I have certainly seen two cases of pericarditis following an acute peritonsillitis where operation was refused and the influence of chronic septic tonsils upon muscular rheumatism, fibrositis and septic arthritis is surely too well established to need argument. What is the chief factor at work upon the heart in exophthalmic goitre? There is no question of the great improvement that takes place in cases of exophthalmic goitre after removal of septic tonsils and in quite a good proportion even cure, so that one may conclude that the sepsis is of primary importance. The association of tonsillitis with general symptoms has been admitted from the days of my youth and even longer and though I grant that a man who devotes himself to a specialty, is liable to look at disease from one point of view, the other fellow is too ready to neglect the aid of a specialist.

Yours, etc.,

W. KENT HUGHES.

Eve of St. Valentine.

TUBERCULIN.

Sir,—Will you please allow me to state that, though I have not seen the report of Dr. Bardswell and Mr. Thompson, reviewed in *The Medical Journal of Australia* for February 14, 1920, yet my knowledge of the employment of tuberculin in English sanatoria in 1908, 1909 and 1910 makes me confident that the method they describe as "disappointing" was the method of small doses and not the method of increase to large doses advocated and used by Dr. Camac Wilkinson?

Yours, etc.,

F. GUY GRIFFITHS, M.D..

171 Macquarie Street, Sydney,
February 14, 1920.

Books Received.

HEALTH IN THE HOME, by A. Knyvett Gordon, M.B., B.C., B.A.; 1919. London: Jarrolds Publishers (London), Limited; Crown 8vo., pp. 245. Price, 5s. net.

LECTURES TO STUDENTS ON DIPHTHERIA, MEASLES, SCARLATINA, by Frank V. G. Scholes, M.D., B.S., D.P.H.; 1920. Melbourne: Modern Printing Company Pty., Ltd.; Demy 8vo., pp. 236.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

The undermentioned have been registered, under the provisions of the *Medical Act, 1912 and 1915*, as duly qualified medical practitioners:—

William Hunter Watson Cheyne, M.R.C.S., Eng., 1913; Lic. R. Coll. Phys.., Lond., 1913, care of Bank of Australasia, Pitt Street Branch, Sydney.

Thomas Sacheverell Greenaway, M.R.C.S., Eng., 1916; Lic. R. Coll. Phys., Lond., 1916, care of Union Bank, Sydney.

Robert Agnew Eakin, M.B., Bac. Surg., 1913, Univ. Melbourne, 89A Macleay Street, Sydney.

VICTORIA.

The undermentioned have been registered, under the provisions of Part I. of the *Medical Act, 1915*, as duly qualified medical practitioners:—

Jack Rail Robertson, M.B. *et* Ch.B., Melb., 1917, Mornington.

David Edmund Stodart, M.B. *et* Ch.B., Edin., 1910, "Bothwell," Tintern Avenue, Toorak.

James Charles Power Strachan, M.B. *et* Ch.B.., Adelaide, 1914, c/o. Miss Tuckett, "Redlands," Upper Macedon.

The undermentioned additional qualification has been registered:—

Roy William Chambers, Dip. G.O., Dublin, 1919.

The name of the late Dr. Nicholas Michael O'Donnell has been removed from the Register.

Medical Appointments.

Dr. M. V. Southey (B.M.A.) has been appointed Government Medical Officer at Jerilderie, New South Wales.

Dr. V. G. Webb (B.M.A.) has been appointed Public Vaccinator for the South-Eastern District, Dr. A. Tracey Bull for the Midland District and Dr. W. A. Luke (B.M.A.) for the North-Eastern District of Victoria.

The appointment as Officers of Health of Dr. M. W. Cave (B.M.A.) for the Northern portion of the Shire of Colac, of Dr. H. I. Carlile (B.M.A.) for the Shire of Fern Tree Gully and of Dr. C. C. Marshall (B.M.A.) for the Balmoral Riding of the Shire of Wannon, Victoria, is announced in the *Victoria Government Gazette.*

Dr. E. Bateman (B.M.A.) has been appointed District Medical Officer and Public Vaccinator at Youanmi, Western Australia.

It is announced that Dr. W. Ernest Jones (B.M.A.) has been appointed a member of the Midwives Board of Victoria.

During the absence on leave of Dr. J. T. Hollow (B.M.A.), Dr. Whitfield de Witt Henty (B.M.A.) has been appointed Acting Superintendent of the Hospital for the Insane, Mont Park, Victoria.

The appointment as Junior Medical Officers to the Lunacy Department of Victoria of Dr. O. Joynt (B.M.A.), Dr. W. de Witt Henty (B.M.A.), Dr. William R. Trembath (B.M.A.) and Dr. D. D. Cade (B.M.A.) is announced in the *Victoria Government Gazette.*

The resignation of Dr. F. E. Clay (B.M.A.) as Government Medical Officer at Quairading, Western Australia, and the appointment of Dr. W. H. Jermyn to the same office is announced.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxvii.

Victorian Eye and Ear Hospital: Honorary Aural Surgeon.

Australian Institute of Tropical Medicine, Townsville: (*a*) Physiologist and Bio-Chemist and (*b*) Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges (other than the Grand United Order of Oddfellows and the Melbourne Tramways Mutual Benefit Society), Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30.-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

Feb. 24.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Feb. 25.—Vic. Branch, B.M.A., Council.
Feb. 26.—Q. Branch, B.M.A., Council.
Mar. 2.—N.S.W. Branch, B.M.A., Ethics Committee.
Mar. 3.—Vic. Branch, B.M.A..
Mar. 5.—Q. Branch, B.M.A.
Mar. 9.—Tas. Branch, B.M.A..
Mar. 9.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Mar. 11.—N.S.W. Branch, B.M.A., last day for nomination of candidates for election to the Council.
Mar. 11.—Vic. Branch, B.M.A., Council.
Mar. 11.—Q. Branch, B.M.A., Council.
Mar. 16.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Commitee.
Mar. 17.—W. Aust. Branch, B.M.A..

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney. (Telephone: City 2645.)